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Editorial
Άρθρο σύνταξης

Mental health promotion and prejudices

Psychiatriki 2013, 24:166–167

There have been major advances during the last 60 years regarding both, the diagnosis and treatment of mental disorders.

Contemporary psychiatry is comparable to cardiology in consideration of life expectancy as well as the quality of life of patients treated. The application of the "disease model" exhibits significant advances concerning crucial clinical and research issues such as: (i) Taxonomy of mental disorders. (ii) Exploring the potential underlying mechanisms. (iii) Applying modern therapeutic models (pharmacological and psychotherapeutic). However, the "disease model" has some fundamental shortcomings, (i) it victimizes and pathologizes, (ii) it focuses on weaknesses and malfunction, while tending to ignore talents of the individual, (iii) It rushes to the request for assistance as dictated by disease/disorder, without investing in promoting healthy life. In this framework it appears imperative that the principles of "positive psychology" not be applied in a contradictory, but in a complementary way.

In contrast "positive psychology" is focused on strength as well as weakness, and is interested in building the best things in life while repairing the worst. It is also concerned with making the lives of normal people fulfilling and with nurturing high talents as with hailing pathology.

The following models are currently applied in promoting mental health: (i) the clinical model, based on the criterion of the behavior "Above Normal", (ii) the maturity model, (iii) the model of positive psychology, (iv) the models of social/emotional intelligence, (v) the model of subjective well-being, (vi) the adaptation model (Resilience).

The models based on the perspective of "positive psychology" put forward questions regarding the elucidation of innate diagnostic and treatment issues whereas simultaneously reinforcing the need for localization and regulation of weaknesses and difficulties. However, these models have no constructive coherence. Furthermore they do not manifest unified hypotheses regarding the promotion of mental health, constituting a system of health rules with limited practical application.

It is a common, eternal, and cross-cultural experience that clinical psychiatry and research are associated with prejudice. Both the "disease model" and "positive psychology" are considered with prejudice; hence a vicious circle is formed.

An obvious question is raised: what is the nature of prejudices and how are they elicited and/or maintained?

Although the term prejudice includes a wide spectrum of beliefs and behaviors, a common denominator that reflects the essence of the theme is an incorrect conception of the dipole between cause and effect. Given the need of the organism to comprehend its environment with consistency and dealing with it effectively, this leads the organism to calibrate the relationships between cause and effect. In other words, whereas the individual seeks the best possible relationship with our tyrants of our life, i.e., pleasure and displeasure are subjected to errors, which correspond to type I and type II statistical errors. Type I statistical error is equivalent to prejudice.

Prejudices exhibit cross-cultural universality being resistant to education. This rather general position appears to be adopted from the scientific community and the same position might be applied irrespective of whether the prejudice is attributed to the individual, is carried cross-culturally, or yet is determined genetically.

Contemporary advances in neuroscience and the related fields supported by the clinical practice provide evidence with explanatory power regarding underlying mechanisms that serve and express the prejudice. Empirical research provides evidence indicating that the nature of prejudice is of dissociative texture being associated with childhood injuries.

Psychophysiological studies lend support to the notion that contradictory reasoning, "ex-consequentia reasoning", forms the sensitive substratum that predisposes for the becoming and maintenance of post-traumatic stress disorder and further anxiety disorders.

Paradoxical causation concerns the coincidence such as intuition pre-apprehension and telepathy are characterized as magical ideation, which is regarded as the core of positive symptom of schizophrenic delusion.

For the production and preservation of prejudices, the learning's theories suggest the implication of Social Learning, the Cognitive Dissonance, the Attribution Theory as well as the Gestalt Theory.

Congruent evidence indicates that the left prefrontal cortex (Broadman area 45) responds based on beliefs, but not reasoned analysis; in contrast the right prefrontal cortex is activated during uncertain information based on reasoned analysis inhibiting/preventing the left prefrontal cortex from deducing immature conclusion. In this sense it is indicative that the impairment of the prefrontal cortex, with its connections being thought to underlie the prejudice, manifests significant correlation with the clinical and non-clinical obsessive-compulsive symptomatology.

It was not so long ago when inflammations were attributed to "sins" and/or "wicked ghosts" but their successful treatment was established with the implementation of evidence-based methodology, finally a modification of the way of thinking. Mutatis mutandis we are obliged to approach and manage the dilemma involved in the prejudice: Astronomer *vs* Astrologer, Chemist *vs* Alchemist, Doctor *vs* Charlatan.

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Άρθρο σύνταξης
Editorial

Προαγωγή ψυχικής υγείας και προκαταλήψεις

Ψυχιατρική 2013, 24:168–169

Τα τελευταία 60 χρόνια έχουν σημειωθεί σημαντικές πρόοδοι τόσο στη διάγνωση όσο και στη θεραπεία των ψυχικών νοσημάτων.

Η σύγχρονη ψυχιατρική, είναι εφάμιλλη της καρδιολογίας με κριτήρια το προσδόκιμο ζωής και την ποιότητα ζωής των ασθενών. Η εφαρμογή του νοσολογικού μοντέλου, έχει να επιδείξει σημαντικές προόδους σε κρίσιμα κλινικά και ερευνητικά ζητήματα όπως: (α) Ταξινόμηση/κατηγοροποίηση ψυχικών παθήσεων, (β) ταυτοποίηση αιτιοπαθογενετικών μηχανισμών, (γ) εφαρμογή και αξιολόγηση θεραπευτικών μεθόδων (φαρμακευτικών και ψυχολογικών). Παρόλ' αυτά στο νοσολογικό μοντέλο αναγνωρίζονται θεμελιακοί περιορισμοί όπως το γεγονός ότι: (α) «θυματοποιεί» ενώ τείνει να αγνοεί ότι το άτομο αποφασίζει, επιλέγει, διαθέτει υπευθυνότητα, (β) εστιάζει στις αποκλίσεις και αδυναμίες κατ' εξοχήν ενώ τείνει να αγνοεί τις δυνατότητες/χαρίσματα του ατόμου, τέλος (γ) σπεύδει στο αίτημα για βοήθεια όπως υπαγορεύει η νόσος/διαταραχή, δίχως να επενδύει αναλόγως στην προαγωγή των ευνοϊκών μεταβλητών ζωής. Πλέον καθίσταται βάσιμα υποσχόμενη η αναζήτηση των νομοτελειών της εφαρμογής της προοπτικής της προαγωγής της ψυχικής υγείας, ασφαλώς συμπληρωματικά προς το ισχύον νοσολογικό μοντέλο και όχι αντιθετικά.

Η συγκεκριμένη προοπτική αποσκοπεί τόσο στη βελτίωση της αναπηρίας όσο και στο ευ-έχειν (Ευεξία), ενώ ενδιαφέρεται συγχρόνως για την ανάδειξη των βέλτιστων ατομικών χαρακτηριστικών του ατόμου και την αποκατάσταση των νοσηρών μεταβλητών ζωής, θεραπεύουσα την παθολογία και οδηγώντας στην ευδαιμονία.

Η σύγχρονη βιβλιογραφία αναδεικνύει την ύπαρξη των ακολούθων μοντέλων προαγωγής ψυχικής υγείας: (α) το κλινικό μοντέλο, που στηρίζεται στο κριτήριο της μέσης συμπεριφοράς (Above Normal), (β) το μοντέλο ωριμότητας (Maturity), (γ) το μοντέλο θετικής ψυχολογίας (Positive Psychology), (δ) το μοντέλο κοινωνικό/συναισθηματικής νοημοσύνης (Emotional Intelligence) (ε) το μοντέλο υποκειμενικής ευεξίας (Subjective Well-Being), (στ) το μοντέλο προσαρμογής (Resilience).

Τα συγκεκριμένα μοντέλα θέτουν ερωτήματα σχετικά με την αποσαφήνιση εγγενών διαγνωστικών και θεραπευτικών ζητημάτων ενώ ταυτόχρονα ενισχύουν την ανάγκη για επισήμανση/κάλυψη κενών & αδυναμιών. Όμως, εμφανίζουν μη δομική συνοχή και αδυναμία ενιαίας υπόθεσης σχετικά με την προαγωγή της ψυχικής υγείας, συγκροτώντας ένα σύστημα κανόνων με περιορισμένη πρακτική εφαρμογή.

Είναι κοινή, διαχρονική και διαπολιτισμική εμπειρία ότι η ψυχιατρική πρακτική και έρευνα διέπεται από προκαταλήψεις. Τόσο το νοσολογικό μοντέλο όσο και τα μοντέλα προαγωγής της ψυχικής υγείας αντιμετωπίζονται με προκαταλήψεις, διαμορφώνοντας έναν φαύλο κύκλο.

Αυτονόητα ανακύπτει το ερώτημα ποια είναι η φύση του φαινομένου των προκαταλήψεων και ποιες συνθήκες το συντηρούν;

Παρόλο που η έννοια των προκαταλήψεων περιλαμβάνει μία ευρεία σειρά από πεποιθήσεις και συμπεριφορές, υφίσταται ένας κοινός παρονομαστής που αντικατοπτρίζει την ουσία του θέματος που έγκειται στην εσφαλμένη εννοιοποίηση του διπόλου αίτιο-αποτέλεσμα. Υπενθυμίζεται ότι η ανάγκη του οργανισμού να κατανοεί το περιβάλλον του με συνέπεια και να το χειρίζεται αποτελεσματικά υποχρεώνει τον οργανισμό να βαθμονομεί τις σχέσεις αίτιο-αποτέλεσμα. Με άλλα λόγια καθόσον το άτομο αναζητά την καλύτερη δυνατή σχέση με τους δύο «τυράννους» της ζωής (ηδονή *vs* οδύνη) είναι εκτεθειμένο στο να υποπίπτει σε σφάλματα, τα οποία μπορεί να συγκριθούν με στατιστικά σφάλματα τύπου Ι (ψευδώς θετικό) και τύπου ΙΙ (ψευδώς αρνητικό).

Οι προκαταλήψεις εμφανίζουν διαπολιτισμική παγκοσμιότητα ενώ είναι ανθεκτικές στην εκπαίδευση. Αυτή η μάλλον γενική τοποθέτηση φαίνεται ότι έχει υιοθετηθεί από την επιστημονική κοινότητα επειδή μπορεί να εφαρμοσθεί ανεξαρτήτως του εάν οι προκαταλήψεις αποδίδονται στο άτομο, μεταφέρεται πολιτισμικά η ακόμη είναι γενετικά προκαθορισμένη.

Σύγχρονες πρόοδοι στη νευροεπιστήμη και τα σχετικά πεδία συνεπικουρούμενες από την κλινική πρακτική παρέχουν ενδείξεις με ερμηνευτική αξία αναφορικά με τους μηχανισμούς που υπηρετούν και εκφράζουν τις προκαταλήψεις.

Εμπειρικές έρευνες παρέχουν ενδείξεις ότι η φύση των προκαταλήψεων είναι ψυχο-αποσυνδετικής υφής, σε πολλές περιπτώσεις μάλιστα συνδέονται με παιδικά τραύματα. Κλινικο-εργαστηριακές μελέτες υποστηρίζουν τη θέση ότι ανακόλουθες συλλογιστικές στρατηγικές "ex-consequentia reasoning" διαμορφώνουν το υπόστρωμα ευαισθησίας που προδιαθέτει στην έκλυση και συντήρηση μετατραυματικού συνδρόμου αλλά και άλλων αγχωδών διαταραχών.

Ανεπίδεκτη λογική (αφύσικη) αιτιότητα αναφορικά με τις συμπτώσεις όπως διαίσθηση, προαίσθηση, τηλεπάθεια χαρακτηρίζονται σαν μαγικός ιδεασμός που θεωρείται ο πυρήνας των θετικών συμπτωμάτων της σχιζοτυπίας ισοδυνάμου του παραληρήματος αναφοράς στη σχιζοφρένεια.

Για την έκλυση και συντήρηση των προκαταλήψεων η μαθησιακή προοπτική υποστηρίζει την εμπλοκή πτυχών της κοινωνικής μάθησης, της γνωσιακής δυσαρμονίας (Cognitive Dissonance), της θεωρίας της απόδοσης (Attribution Theory), καθώς και της Gestalt ψυχολογίας.

Στο πλαίσιο αυτού του προβληματισμού συγκλίνουσες κλινικές και ερευνητικές ενδείξεις αποκαλύπτουν ότι ο αριστερός προμετωπιαίος φλοιός παράγει απαντήσεις με βάση τις πεποιθήσεις και όχι την λογική ανάλυση (Broadmann area 45), ενώ ο δεξιός προμετωπιαίος φλοιός ενεργοποιείται κατά την επεξεργασία απροσδιόριστων πληροφοριών με βάση την λογική αναστέλλοντας/προλαμβάνοντας τον αριστερό προμετωπιαίο φλοιό στο να εξάγει ανώριμο συμπέρασμα και με το να επανεξέτασει την εξαγωγή ωρίμου συμπεράσματος. Είναι ενδεικτικό ότι η δυσλειτουργία του προμετωπιαίου λοβού με τις συνδέσεις του υπόκειται του μαγικού ιδεασμού και των παράλογων πεποιθήσεων-προλήψεων (ισοδυνάμου των προκαταλήψεων) εμφανίζει αυξημένη συσχέτιση με την κλινική και μη κλινική ιδεοψυχαναγκαστική συμπτωματολογία.

Δεν είναι πολύ μακρινή η περίοδος όπου οι λοιμώξεις αποδίδονταν στις «αμαρτίες» η/και στα «κακά πνεύματα», ενώ η αντιμετώπισή τους εξασφαλίσθηκε με την εφαρμογή των διαγνωστικών μεθόδων που στηρίχθηκαν στις «έγκυρες» ενδείξεις (τροποποίηση του τρόπου σκέπτεσθαι). Κατ' αναλογία (mutatis mutandis) καλούμαστε και ως προς τις προκαταλήψεις να επιλύσουμε με παραγωγικό τρόπο το δίλημμα: Αστρονόμος *vs* Αστρολόγος, Χημικός *vs* Αλχημιστής, Γιατρός *vs* Τσαρλατάνος.

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Research article
Ερευνητική εργασία

Suicide in Greece: 2001–2011

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Since 2008 several European countries have fallen into a financial crisis. This crisis has mainly affected the Greek population. The lower of income and the increase of unemployment as consequences of crisis lead to negative effects on people's mental health. Usually, in periods of economic crisis there is an increase of suicidality of population. The aim of this study is to examine the changes of suicide rates in Greece during the last decade (2001–2011) with particular consideration in the recent period of economic crisis (2008–2011). Data regarding the greek general population and the crude data on suicides were obtained from the Hellenic Statistical Authority (ELSTAT). We assessed the specific suicide rate, i.e. the number of suicide cases per 100.000 inhabitants (SSR) using population data on the 2001 and 2011 census. Yearly and mean total, age and sex-SSR were calculated in five years age groups. There were no suicide cases among children under the age of fifteen. We compared total and male, female SSR during the period before the crisis (2001–2007) and during the crisis (2008–2011). During the decade 2001–2011 a total number of 4133 suicide cases were recorded. There were 3423 (82.8%) male suicides and 710 (17.2%) female suicides. During the decade 2001–2011 total SSR increased by 38.4%. In males increased by 33.1% and in females by 69.6%. In the period before the crisis (2001–2007) total SSR decreased by 3.9%. In males decreased by 8.4% but in females increased by 22.3%. During the period of crisis (2008–2011) total SSR increased by 27.2%. In males increased by 26.9% and in females by 28.5%. There was a statistically significant increase in total SSR during the crisis regarding subjects 50–54 years old ($t=3.43$, $p=0.007$) and in total SSR of males ($t=2.31$, $p=0.047$) as well as of the males age groups 50–54 ($t=3.56$, $p=0.006$), 45–49 ($t=2.87$, $p=0.02$), 30–34 ($t=2.96$, $p=0.02$). There were no statistically significant differences both in total SSR and in SSR of all age groups of females during the crisis. The most often used method of suicide all the year of this study was by hanging. In absolute count the total suicide cases for the year 2011 in Greece were 477 (SSR=4.22) and the male suicides 393 (SSR=7.02) which are the highest number of suicides observed in Greece during the last decades. Findings suggest an increase in suicide mortality in Greece during the financial crisis. Reorientation of the goals of the national mental health system as well as targeted interventions should be applied in high risk individuals, i.e. unemployed, poor, suffering from mental or/and physical illnesses, in order to prevent or to mitigate the impact of the financial crisis in the greek population.

Key words: Suicide, male, female, financial crisis, prevention, Greece

Introduction

The european economic crisis started in 2008 and has mainly affected the Greek population. The major consequences of financial crises are the lowering of income and the increase of unemployment or the fear of unemployment which have adverse consequences for the mental health of individuals including suicidal behaviour.[1,2]

Suicide rates in Greece are among the lowest in Europe. Explanations include many social protective factors existing in the Greek society such as strong family ties, high social cohesion, low isolation and alienation. However, the last decades, Greece became member of the European Union. So, the life-style of people has been changed.[3]

It is well known that suicidality increase in periods of economic crisis.[1,4,5] However, some exceptions have been mentioned concerning countries with low rises in unemployment and poverty and the development of systems of social protection.[2]

During the last years, there is a great interest on the consequences of recent economic crisis of Greece on citizens' suicidality but the data are contradictory.[6–9]

In this preliminary report, we examined how suicide rates changed during the last decade in Greece (2001–2011) with particular consideration given in the recent period of crisis (2008–2011).

Material and method

Data regarding the greek general population and the crude data on suicides were obtained from the Hellenic Statistical Authority (ELSTAT).[10–11] We assessed the specific suicide rate (number of suicide cases per 100.000 inhabitants, SSR) using population data based on the 2001 and 2011 census. Yearly and mean age and sex-SSR were calculated in five year age groups (range 15 to 85+ years). There were no suicide cases among children under the age of fifteen. We estimated the percentage differences in SSR between years 2001 and 2007 and between 2008 and 2011 using the equation (final value-initial value/initial value×100).[12] Total and male, female SSR's during the period before the crisis (2001–2007) and during the crisis (2008–2011) were compared using two sample t-tests. The methods of suicide were classified according to ISD-9-CM Classification System. For the statistical evaluation the SPSS.20 statistical package was used.

Results

During the last decade (2001–2011), a total number of 4133 suicide cases were recorded. Male suicides were 3423 (82.8%) while suicides committed by females were significantly lower (710, 17.2%). Deaths by suicide constitute 0.35% of all deaths in Greece during the same period.

Table 1 shows the general population of Greece, the absolute number of suicides, the sex-specific suicide rates (SSR) and the male/female suicide ratios for the years 2001–2011 in Greece. During the decade 2001–2011, although a fluctuation of suicides was noted, total SSR increased by 38.4% Suicide rates in males increased by 33.1% while in females by 69.6% (figure 1).

In the period before the crisis (2001–2007), total SSR decreased by 3.9%. In males, suicide rates decreased by 8.4% while in females increased by 22.3%.

During the period of crisis (2008–2011) total SSR increased by 27.2%. In males, suicide rates increased by 26.9% while in females suicide rates were further increased by 28.5%.

Our analysis revealed a statistically significant increase in total SSR during the crisis regarding subjects 50–54 years old ($t=3.43$, $p=0.007$). Furthermore, a statistically significant increase in total SSR of males during the crisis ($t=2.31$, $p=0.047$) as well as in the male age groups 30–34 ($t=2.96$, $p=0.02$), 45–49 ($t=2.87$, $p=0.02$), 50–54 ($t=3.56$, $p=0.006$) was revealed. On the contrary, SSR in the male age group of 60–64 years decreased significantly during the crisis ($t=2.51$, $p=0.03$). There were no statistically significant differences both in total SSR and in SSR of all age groups of females during the crisis. However, it should be mentioned the fact that there was a doubling of female suicides during the last two years (table 1).

Regarding the methods of suicide, the most often used method was by hanging all the years of this study[10,11] (table 2).

What is quite interesting though, is the fact that total suicide in absolute count for the year 2011 were 477 (SSR=4.22) and the number of male suicides 393 (SSR=7.02) which are the highest number of suicide observed in Greece during the last decades. It is also worth to note that in the greater Athens area (region of Attica), the greater urban center of Greece, suicide cases have risen during the crisis from 111 (SSR=2.73) to 172 (SSR=4.18), the greater number observed during the last decade. This means an increase of suicide 53% during the period of crisis for the Athens area.[10,11]

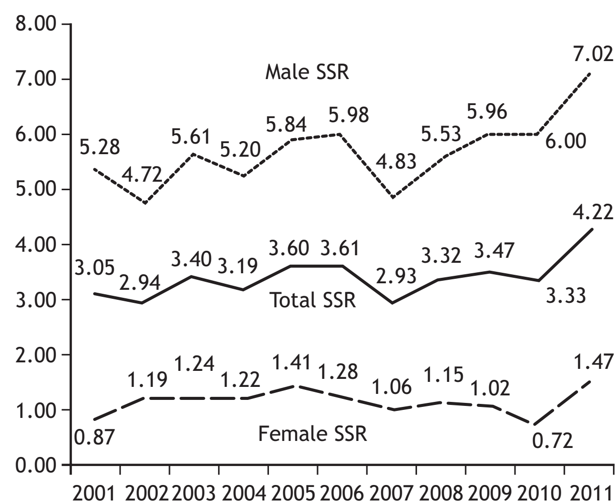

Figure 1. The fluctuation of the annual specific suicide rate (SSR) during the period 2001–2011 in Greece.

Discussion

According to our results there is evidence of a clear increase of suicide in Greece during the economic crisis. However, it should be noted that the number of suicide could have been underestimated because of a social stigma against suicide, for religious reasons or because that many deaths from suicide can be reported as accidential, i.e. falls or drowning etc.[3,13–15] Other recent studies found an increased prevalence of depression as well as of suicide ideation and attempts during the recent economic crisis in Greece.[16–18] The association of the above conditions to completed suicide is well known.[19–21]

The strong association between unemployment and suicide is well documented.[4,22] During the period of crisis in Greece (2008–2011) unemployment rates increased from 7.6% to 17.7% and continued to raise the next years.[23]

According to our data being mainly male aged 50–54 years has the higher risk of suicide during the crisis. This can be explained by the man's social role and many other factors such as that these people have to deal with early compulsory retirement, job insecurity and loss of income. Yet, men are usually more isolated and have less social support.[24]

From the system's perspective, the mental health consequences of recent economic crisis in Greece include the dramatic health care spending cut, the reduced nurse to patient ratios, the decrease of beds in public hospitals, the rising of emergency admissions in the public hospitals, the cut backs in salaries of professionals working in hospitals, the reduction of the number of consultants in psychiatric departments, the overcrowded inpatients psychiatric units in public hospitals.[1,25–27]

In this period of crisis strategic intervention priorities must include reinforcement of social security networks, revamp essential services towards weaker populations that need to be protected, rehabilitation and social inclusion of unemployed individuals, improvement and reorientation of mental health system, timely treatment of patients with mental disorders. The apply of targeted interventions are expected to prevent or to mitigate the next years the impact of financial crisis to the Greek population.[1,28–30]

Table 1. General population, absolute number of suicides, total, male, female specific suicide rates (SSR) and the male/female suicide ratios for the years 2001–2011 in Greece.

Year	*General population*	*Total suicides*		*Male suicides*		*Female suicides*		*M:F Ratio*
		N	*SSR*	*N*	*SSR*	*N*	*SSR*	
2001	10,931,206	334	3.05	286	5.28	48	0.87	6.08
2002	10,968,708	323	2.94	257	4.72	66	1.19	3.97
2003	11,006,377	375	3.40	306	5.61	69	1.24	4.52
2004	11,040,650	353	3.19	285	5.20	68	1.22	4.28
2005	11,082,751	400	3.60	321	5.84	79	1.41	4.14
2006	11,125,179	402	3.61	330	5.98	72	1.28	4.67
2007	11,171,740	328	2.93	268	4.83	60	1.06	4.55
2008	11,213,785	373	3.32	308	5.53	65	1.15	4.83
2009	11,260,402	391	3.47	333	5.96	58	1.02	5.85
2010	11,305,118	377	3.33	336	6.00	41	0.72	8.36
2011	11,309,885	477	4.22	393	7.02	84	1.47	4.77

Table 2. Total and male, female SSR according to the method used in Greece: 2001–2007 vs 2008–2010.*

**	*Total SSR*		*Male SSR*		*Female SSR*	
	Mean 01–07	*Mean 08–10*	*Mean 01–07*	*Mean 08–10*	*Mean 01–07*	*Mean 08–10*
E 950	0.29	0.25	0.40	0.28	0.18	0.21
E 951	0.00	0.00	0.00	0.00	0.00	0.00
E 952	0.01	0.01	0.01	0.01	0.00	0.00
E 953	1.78	1.95	2.93	3.39	0.65	0.54
E 954	0.07	0.02	0.08	0.01	0.07	0.02
E 955	0.79	0.90	1.51	1.74	0.09	0.08
E 956	0.04	0.07	0.08	0.12	0.01	0.02
E 957	0.23	0.17	0.30	0.24	0.16	0.09
E 958	0.03	0.02	0.04	0.04	0.02	0.00

* There were no data for the year 2011, ** E950 Poisoning by solid or liquid substances, E951 Poisonig by gases in domestic use, E952 Poisoning by other gases and vapors, E953 Hanging, strangulation and suffocation, E954 Submersion (drowning), E955 Firearms and explosives, E956 Cutting and piercing instruments, E957 Jumping from high place, E958 Other and unspecifed

Αυτοκτονίες στην Ελλάδα: 2001–2011

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Από το έτος 2008 αρκετές ευρωπαϊκές χώρες βρέθηκαν σε κατάσταση οικονομικής κρίσης. Η οικονομική αυτή κρίση επηρέασε κυρίως τον ελληνικό πληθυσμό. Η μείωση του εισοδήματος και η αύξηση της ανεργίας, ως συνέπειες της κρίσης, οδήγησαν σε αρνητικές επιπτώσεις σε σχέση με την ψυχική υγεία του πληθυσμού. Συνήθως σε εποχή οικονομικής κρίσης καταγράφεται αύξηση της αυτοκτονικότητας του πληθυσμού. Σκοπός της μελέτης αυτής είναι να διερευνήσει τις αλλαγές των δεικτών αυτοκτονίας στην Ελλάδα κατά την διάρκεια της τελευταίας 10ετίας (2001–2011) με ιδιαίτερη έμφαση στην περίοδο της παρούσας οικονομικής κρίσης (2008–2011). Δεδομένα σχετικά με τον πληθυσμό της Ελλάδας και του αριθμού των αυτοκτονιών προήλθαν από τα αρχεία της Ελληνικής Στατιστικής Υπηρεσίας (ELSTAT). Υπολογίσθηκε ο Ειδικός Δείκτης Αυτοκτονιών (Specific Suicide Rate, SSR), δηλαδή ο αριθμός των αυτοκτονιών ανά 100.000 κατοίκους χρησιμοποιώντας δεδομένα των απογραφών του πληθυσμού τα έτη 2001 και 2011. Καταγράφηκαν οι ετήσιες μέσες τιμές των SSR σε σχέση με το φύλο και ανά 5ετίες ηλικιών. Δεν υπήρξαν περιπτώσεις αυτοκτονίας σε παιδιά ηλικίας κάτω των δεκαπέντε ετών. Συγκρίσεις έγιναν ανάμεσα στους συνολικούς SSR, τους SSR του ανδρικού και του γυναικείου πληθυσμού στις περιόδους πριν την κρίση (2001–2007) και κατά τη διάρκεια της κρίσης (2008–2011). Στη διάρκεια της δεκαετίας 2001–2011 καταγράφηκε ένας συνολικός αριθμός 4133 αυτοκτονιών, 3423 (82,8%) αυτοκτονίες αφορούσαν άνδρες και 710 (17,2%) αυτοκτονίες αφορούσαν γυναίκες. Κατά τη διάρκεια της δεκαετίας 2001–2011, ο συνολικός SSR αυξήθηκε κατά 38,4% Στους άνδρες καταγράφηκε αύξηση κατά 33,1% και στις γυναίκες κατά 69,6%. Στην περίοδο πριν την οικονομική κρίση (2001–2007) ο συνολικός SSR παρουσίασε μείωση κατά 3,9%. Στους άνδρες μειώθηκε κατά 8,4% ενώ στις γυναίκες αυξήθηκε κατά 22,3%. Στη διάρκεια της κρίσης (2008–2011) ο συνολικός SSR αυξήθηκε κατά 27,2%. Στους άνδρες αυξήθηκε κατά 26,9% και στις γυναίκες κατά 28,5%. Κατά τη διάρκεια της κρίσης σημειώθηκε μια στατιστικά σημαντική αύξηση του συνολικού SSR για τα άτομα ηλικίας 50–54 ετών (t=3,43, p=0,007) και ακόμη, μια αύξηση του SSR του συνολικού ανδρικού πληθυσμού (t=2,31, p=0,047) και για τις ανδρικές ηλικιακές ομάδες 50–54 ετών (t=3,56, p=0,006), 45–49 ετών (t=2,87, p=0,02) και 30–34 ετών (t=2,96, p=0,02). Αντίθετα, παρατηρήθηκε μείωση των αυτοκτονιών στο ηλικιακό φάσμα των 60–64 ετών (t=2,51, p=0,03). Δεν εντοπίστηκαν στατιστικά σημαντικές διαφορές στη διάρκεια της κρίσης στο συνολικό SSR όσο και στα

SSR όλων των ηλικιακών φασμάτων του γυναικείου πληθυσμού. Η συχνότερη μέθοδος αυτοκτονίας σε όλα τα χρόνια της μελέτης ήταν ο απαγχονισμός. Για το έτος 2011 ο συνολικός αριθμός των αυτοκτονιών που καταγράφηκαν στην Ελλάδα ανήλθε στις 477 (SSR=4,22) ενώ οι αυτοκτονίες των ανδρών ήταν 393 (SSR=7,02). Οι παραπάνω καταγραφές αυτοκτονιών είναι οι μεγαλύτερες που σημειώθηκαν στην Ελλάδα τις τελευταίες δεκαετίες. Σύμφωνα με τα ευρήματα της μελέτης αυτής εντοπίζεται σαφής αύξηση της θνησιμότητας από αυτοκτονία στην Ελλάδα την περίοδο της οικονομικής κρίσης. Επαναπροσδιορισμός των στόχων του εθνικού συστήματος ψυχικής υγείας με συγκεκριμένες στρατηγικές παρεμβάσεων σε άτομα υψηλού κινδύνου για αυτοκτονικές συμπεριφορές όπως άνεργοι, φτωχοί, πάσχοντες από ψυχικές ή/και σωματικές παθήσεις θα πρέπει να εφαρμοστούν, προκειμένου να προληφθούν ή να μετριασθούν τα προσεχή χρόνια οι αρνητικές επιπτώσεις της οικονομικής κρίσης στον ελληνικό πληθυσμό.

Λέξεις ευρετηρίου: Αυτοκτονία, άνδρες, γυναίκες, οικονομική κρίση, πρόληψη, Ελλάδα

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Research article
Ερευνητική εργασία

Admissions in Dromokaition Psychiatric Hospital of Athens: 1901–1985

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Established in 1887, Dromokaition is the first psychiatric hospital in Athens. Information available for the profile of patients admitted to psychiatric hospitals in Greece, especially for the first half of the 20th century, is very scarce. The aim of the study is to point out the characteristics of patients admitted and the influence of European dominant views on mental diseases in Greek psychiatry. Data for 3014 patients (20% of total number) for the period 1901-1985 were obtained via systematic sampling. The data available were: entry date, gender, age, occupation, brief medical history. The 56 diagnoses have been classified into 9 groups. We have used descriptive statistical methods, two-way associations, odds ratios and cluster analysis, permitting to point out the main characteristics of admitted patients. The preponderance of male admissions in the first decades of the 20th century has been progressively balanced out. About a half of total admissions were schizophrenia-related. The percentage of male patients was significantly higher in personality disorders; for major affective disorders and neuroses the opposite occurs. Progressive paralysis of the insane, a frequent diagnosis in the first decades of the 20th century becomes rare thereafter. In conclusion social changes, major historical events and the evolution of views on psychiatric care have left their traces in the profile of patients admitted.

Key words: Dromokaition Psychiatric Hospital of Athens, schizophrenia, progressive paralysis of the insane, gender, occupation

Introduction

The modern Greek state was established in 1828, following the Greek war of independence from the Ottoman empire. It is obvious that pressing practical needs as well as clinical, epidemiological and public health problems had to be tackled.[1]

The practice of committing patients to psychiatric institutions appeared in the island of Corfu in 1838, when the *Mental Asylum of Corfu* was established by the British Governor of Ionian islands. Internment became gradually the main strategy for patients with severe and "noisy" symptoms, but a full century

elapsed before this trend was sufficiently generalized, following the creation of a network of public and private institutions. Only in the 1970's this practice became a controversial issue.

Dromokaition psychiatric hospital opened its doors in 1887. It was the sole psychiatric institution for the capital until 1904. The French psychiatrist L. Lunier[2] contributed to the conception and realization of the hospital, focusing on the care of patients in separate wards following hospital fees, diagnosis and clinical course.[3] It has been, over time, one of the main gates of entry for therapeutic and organizational methods of modern psychiatry into Greece.

We expect that the study of admissions in a large psychiatric hospital for 85 years will reveal both the profile of patients admitted and the influence of European psychiatry in our country, since only a small number of studies is available.[4]

Material and method

The data used were obtained via systematic sampling from the total hospital admissions between 1901 and 1985. In particular, we selected patients with a last digit 2 or 7 in their admission serial number. 1901 was chosen as the start date due to a more systematic keeping of admission records. The end year of the study was determined by the introduction of the National Health Service in Greece and the emergence of new developments in psychiatry.[5]

For hospital entrants, the following data were available: date of entry, gender, age, occupation, brief medical history (usually simply the diagnosis at entry), while in some cases doctors included treatment methods, or even writings from the patients themselves. Information about the follow-up patient status is very sparse and sporadic.

Criteria for grouping diagnoses

The 56 different diagnoses found in the hospital records are shown in table 1. These were classified into 9 categories (disease groups, including a group of unclassified, table 2). For the grouping, we have used mainly the criteria by WHO (1975)[6] concerning the period under investigation and ICD 10, (table 2, column 4), cross-examined by relevant psychiatric manuals and published studies.[7–10]

Table 1. Main diagnoses/gender.

Diagnosis		*Number*			*(%)*	
		M	*F*	*Total*	*M*	*F*
1.	Primitive/precocious dementia	98	42	140	70	30
3.	Paranoid psychosis	205	104	309	66.3	33.7
4.	Schizophrenia	562	353	915	61.4	38.6
23.	Progressive paralysis of the insane	166	13	179	92.7	7.3
13.	Manic-depressive disorder	42	67	109	38.5	61.5
39.	Toxic mania	57	3	60	95	5
25.	Elderly psychosis	14	40	54	25.9	74.1
5.	Psychosis due to degeneration	42	11	53	79.2	20.8
26.	Alcoholic psychosis	71	6	77	92.2	7.8
35.	Neuroses	30	38	68	44.1	55.9
29.	Organic encephalopathy	25	19	44	56.8	43.2
6.	Periodic psychosis	56	27	83	67.5	32.5
45.	Psychosis on a ground of mental retardation	35	24	59	59.3	40.7
15.	Melancholy of involution	19	36	55	34.5	65.5
16.	Melancholy	59	70	129	45.7	54.3
8.	Intermittent psychosis	25	32	57	43.9	56.1
47.	Paranoia	24	19	43	55.8	44.2
49.	Psychoneurosis	20	17	37	54.1	45.9
52.	Psychomotor agitation	23	10	33	69.7	30.3
53.	Mental confusion	27	15	42	64.3	35.7
55&56.	Unclear or no diagnosis	49	36	85	57.6	42.4

Table 2. Table of initial diagnoses/groups of diseases.

Code Nr	*Initial registration of diagnoses*	*Number of patients and (%)*	*Groups of diseases*	*Number of patients and (%)*
1.	Primitive dementia	140 (4.1)	1. Schizophrenia and related diseases F20, F20.0, F20.2, F20.3, F22, F23.0, F22.9, F23.0, F23.1, F25	1531 (50.8%)
2.	Paranoid psychosis	309 (10.5)		
3.	Acute schizophrenic syndrome	10 (0.3)		
4.	Schizophrenia	915 (30.4)		
5.	Psychosis due to degeneration	53 (1.8)		
6.	Periodic psychosis	83 (2.8)		
7.	Psychomotor agitation	5 (0.2)		
8.	Intermittent psychosis	57 (1.9)		
9.	Catatonic agitation	3 (0.1)		
10.	Schizoaffective psychosis	15 (0.5)		
11.	Schizophreniform reaction	2 (0.1)		
12.	Melancholic psychosis	31 (1.0)	2. Major affective disorders F30, F30.0, F31, F32.2, F32.3, F33, F39, F06.32	352 (11.7%)
13.	Manic depressive disorder	109 (3.6)		
14.	Maniac agitation	23 (0.8)		
15.	Involution melancholy	55 (1.8)		
16.	Melancholy	129 (4.3)		
17.	Hypomanic syndrome	4 (0.1)		
18.	Manic syndrome	1 (0.0)		
19.	Neurologic syndrome	23 (0.8)	3. Neurologic diseases G30–G32	24 (0.8%)
20.	Manic depressive disorder	1 (0.0)		
21.	Secondary dementia	24 (0.8)	4. Organic syndromes F00–F05 and F07–F09, F10, F19	471 (15.6%)
22.	Involution dementia	23 (0.8)		
23.	Progressive paralysis of the insane	179 (5.9)		
24.	Psychosis due to toxics	15 (0.4)		
25.	Senile psychosis	54 (1.8)		
26.	Alcoholic insanity	77 (2.6)		
27.	Acute infections of the brain	5 (0.2)		
28.	Early senile psychosis	24 (0.8)		
29.	Organic encephalopathy	44 (1.5)		
30.	Post infectious psychosis	2 (0.1)		
31.	Epileptic psychosis	39 (1.3)		
32.	Psychomotor epilepsia	1 (0.0)		
33.	Post partum psychosis	3 (0.1)		
34.	Epilepsia with psychotic symptoms	3 (0.1)		
35.	Neuroses	68 (2.3)	5. Neuroses F44–F48	73 (2.4%)
36.	Hystero epileptiforme attack	2 (0.1)		
37.	Hysteria	3 (0.1)		
38.	Neurasthenia (1 man, 1941)	1 (0.0)		
39.	Toxic mania	60 (2.0)	6. Personality disorders F10–F19, F60.9	97 (3.2%)
40.	Alcoholism	15 (0.5)		
41.	Cerebral-spinal alcoholic infection	1 (0.0)		
42.	Psychopathic personality	19 (0.6)		
43.	Psychopathic state	2 (0.1)		
44.	Idiotism	7 (0.2)	7. Mental retardation F70–79	94 (3.1%)
45.	Psychosis on the ground of idiotism	59 (2.0)		
46.	Mental retardation	27 (0.9)		
47.	Paranoia	43 (1.4)	8. Psychotic syndromes of not origin F22, F28, F29	193 (6.4%)
48.	Selective insanity	1 (0.0)		
49.	Psychoneurosis	37 (1.2)		
50.	Hysterical psychosis	2 (0.1)		
51.	Psychosis (not specified)	35 (1.2)		
52.	Psychomotor agitation	33 (1.1)		
53.	Mental confusion	42 (1.4)		
54.	Simulation of disease	4 (0.1)	9. Not classified diseases or states F09, F59, F89	179 (5.9%)
55.	Mental disease not classified	31 (1.0)		
56.	No diagnosis	54 (1.8)		

Insanity due to degeneration, primitive or precocious dementia and schizophrenia have been grouped in the group of schizophrenia. In the group of diseases of organic origin we have included the progressive paralysis of the insane – frequent in early 20th century, toxic psychosis, epileptic psychosis, senile psychosis and also post partum psychosis (only three admissions till 1973). Mental confusion has been grouped in psychotic syndromes of non organic origin (42 admissions, 1.2%), as clinical pictures referred to primitive dementia, schizophrenia, or Chaslin's primitive mental confusion (1895). Among them, a significant number of housewives and military, especially in times of war, 1920–1922, 1940–1941, 1946–1947 and ages from 20 to 30 years.

Periodic psychosis and intermittent psychosis have been grouped in schizophrenia. Clinical pictures did not refer to affective disorders. Also the timing of these diagnoses, till 1953, refers to discussions on primitive dementia and schizophrenia.[11] For a small number of patients, less than 10% of the total (approx. 300), the diagnosis was unclear and based on the overall clinical picture, following necessarily current nosological criteria, for example 41 out of 915 diagnoses of schizophrenia registered before 1920.

Results

The sample represents approximately 20% (3014 patients) of the total number of admissions to the hospital, both for the total duration of the study and for each year separately. The sample consisted of 1847 (61.3%) males and 1145 (38%) females; no gender was recorded for 22 patients.

The total number of entrants through time

Figure 1 presents the time series plot for the number of entries to the hospital for each year in our period of study.

For the analysis, we have divided the sample into three sub-periods:

A. *1901–1920*: Between 1887 and 1904, Dromokaition was the only psychiatric establishment in Athens. We note the high incidence of progressive paralysis of the insane, indicative of the syphilis epidemic in that period A large number of diagnoses refers to the theories on the insanity due to degeneration of the 19th century.[12] The high incidence of primitive/precocious dementia refers both to German and French nosography admitted in Greece.

B. *1921–1953*: The large population increase of Athens and the settlement of a large number of refugees from Asia Minor, following the Greek-Turkish war of 1922[13–15] resulted in a substantial rise both in admissions but also in the total number of hospitalized and chronically treated patients. In this period, we also find the catastrophic consequences of World War II.

C. *1954–1985*: Further increase in the population of Athens. Introduction of modern psychopharmacology and social psychiatry and consequent attempts to reform the hospital.

Most medical expenses in period C were paid by the state, instead of patients paying hospital fees themselves in periods A and B.

Two prominent changes observed when one moves from one period to the next are:

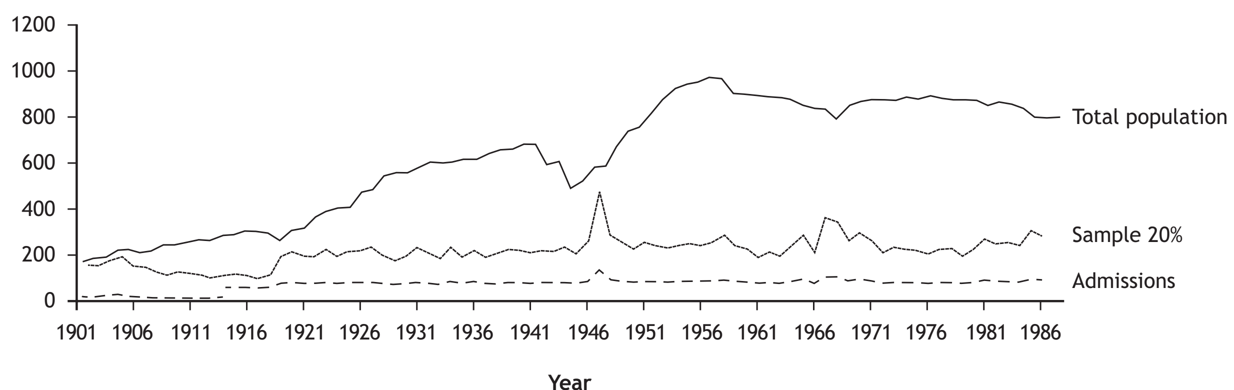

Figure 1. Count data: Total population and admissions (total number and the sample of 20%).

i. The progressive increase of the female percentage of entrants. Women represent 21.7% of the new entries at the hospital between 1901–1920, 34.5% between 1921–1953 and they reach almost half of the total entries in the last period (1954–1985).

ii. The emergence of schizophrenia as the predominant diagnosis for entrants to the hospital. While schizophrenia-related diseases (Disease group I) represent around a half of new entries through the period of study, the incidence of schizophrenia increases rapidly in period B and represents more than 50% after 1953 (table 2). In contrast, primitive/precocious dementia is the second most frequent type of diagnosis (following progressive paralysis of the insane) in the first 20 years of the 20th century, and is totally absent after 1953.

Other variables – descriptive analysis

Figure 2 presents the age distribution of the hospital entrants, both for each gender separately and in total; here age has been grouped in 5-year intervals. It is apparent that women tend to enter the hospital at an older age, although the difference is not statistically significant.[i]

[i] *Using the exact age for each entrant in our sample, the descriptive statistics we obtained are:*
- *For men: mean=35.58, median=33, standard deviation= 12.73*
- *For women: mean=40.14, median=38, standard deviation= 14.96.*

However, the Kolmogorov-Smirnov two-sample test (using the exact age for each person) showed no evidence of difference between the two genders, in terms of their age distribution (p-value<10–3).

For the remainder of the study, age was divided into 7 groups: *Age unknown*: 22 (0.7%), 0–20 (years): 229 (7.6%), 21–30: 928 (30.8%), 31–40: 768 (25.5%), 41–50: 553 (18.3%), 51–60: 296 (9.8%), 61+: 218 (7.2%). The age distribution of the entrants in period A and B is very similar, the main remarkable feature seems to be the increased proportion of older entrants (age 51+) during the period C, 12.5% and 10.4% , for the ages 51–60 and 61+.

The *occupations* of the entrants have been coded into 12 groups: 01: Self employed (3.6%), 0.2: Employees (6.5%), 03: Merchants (6.0%), 04: Workers in manufactures/services, (5.4%), 05: Workers of primary sector of economy (agriculture etc) (11.2%), 06: Individual trades and small businesses (5.3%), 07: Unqualified workers (8.2%), 08: Students (5.2%), 09: Housekeeping (31.7%), 10: Military (4.0%), 11: Unemployed (9.3%), 12: Other (3.1%). Apart from housekeeping (82%), women represent more than 10% only in Groups 01, 04, 11 and 12.

Table 1 shows the absolute and relative frequencies, per gender, for the main diseases diagnosed in the period under examination. As expected, gender seems to be very strongly associated with the occupation of hospital entrants. While the profile of occupations by the men seems to cover the full spectrum of occupations for the period under investigation, 82% of women declared themselves as housewives. This means that the effect of gender on the type of disease diagnosed, discussed above, and could be confounded with the association between occupation and disease. Moreover, the high percentage of women with affective disorders and neuroses is anticipated.[16]

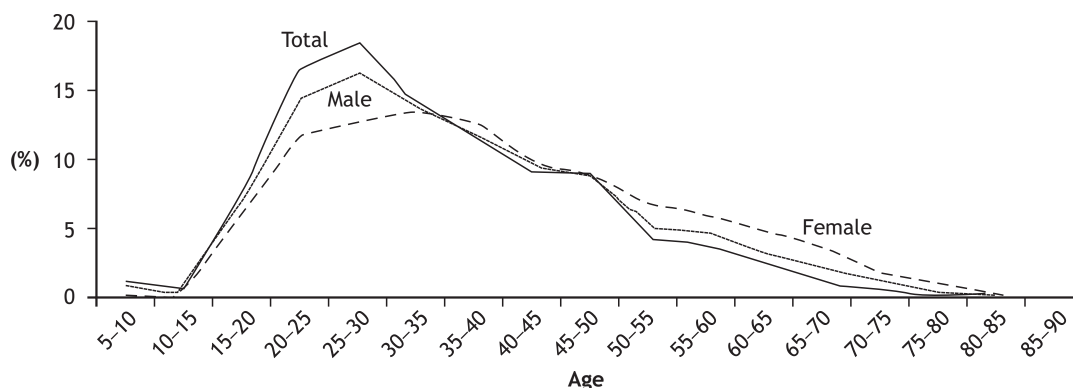

Figure 2. Age distribution of new entrants.

Statistical analysis

Table 2 shows the set of 56 diagnoses at entry and the 9 disease groups we formed (columns 2 and 4 respectively). The third and fifth column of the table present the counts and percentages for each disease group. The absolute and relative frequencies for the main diagnoses are given in table 3.

Two-way associations and odds ratios

We have looked at two-way associations between diagnosis and each of the three other categorical variables in our sample (gender, age group and occupation). All three two-way associations were highly significant.[ii] We have constructed a table of odds ratios, in order to investigate further the association between the main initial diagnoses and the gender of the patient (table 4).[iii]

[ii] *In the disease group – gender association, the observed value of Pearson's chi-square was 110.14 on 8 df, while in the disease group – age group association, the value of the chi-square statistic was 513.99 on 40 df. On both occasions, this gave a p-value less than 10^{-8}, thus providing overwhelming evidence for lack of independence. In the disease group-occupation cross-tabulation, due to the large number of categories in each variable, we had several zero counts and a few very small ones. Since no merging of classes seemed legitimate, we used Monte-Carlo simulation to obtain the p-value of the test for independence. The observed p-value was less than 10^{-5}.*

[iii] *The values in the table present the odds for a patient to belong to one of two disease groups, as opposed to the other, if the patient is a male, divided by the same odds for a female. Thus, for instance we see that the odds for a male to be diagnosed with a personality disorder, rather than emotional psychosis, or neurosis, is about 7 times higher than the corresponding odds for a female. A value "x" in the table indicates a non-significant departure from 1 at the 5% significance level. The main reason that Disease group 6 (personality disorders) is male-dominated sees to be the effect of the common diagnosis of "toxic mania" in the 1930's. In particular, among the 97 entrants in our sample falling in the Disease Group 6, 60 were diagnosed as "toxic maniac" (Disease Code 39), 60% of which entered the hospital between 1929–1939 – admissions related to the use of substances accelerated by the Greek-Turkish war of 1922 and the settlement in Greece of more than a million refugees coming from Asia Minor.*

Table 3. Absolute and relative frequencies of main diagnoses per entry period.

	Frequency			*Rel. frequency (%)*		
Diagnosis	*1901–1920*	*1921–1953*	*1954–1985*	*1901–1920*	*1921–1953*	*1954–1985*
1. Primitive dementia	47	93	0	11.5	7.4	0.0
2. Paranoid psychosis	25	117	167	6.1	9.3	12.4
4. Schizophrenia	41	345	529	10.1	27.5	39.2
8. Progressive paralysis of the insane	66	103	10	16.2	8.2	0.7
9. Manic-depressive disorder	2	57	50	0.5	4.5	3.7
31. Melancholia	33	41	55	8.1	3.3	4.1

Table 4. Odds ratios of disease groups per gender.

Disease → group Men ↓	*Women* 1	2	3	4	5	6	7	8	9
1	–	2.2	×	0.6	2.2	0.3	×	×	×
2	0.4	–	×	0.3	×	0.1	0.4	0.6	0.3
3	×	×	–	0.4	×	0.1	×	×	×
4	1.5	3.4	2.6	–	3.3	0.4	×	2.1	×
5	0.4	×	×	0.3	–	0.1	0.4	×	0.3
6	3.2	7.2	5.5	2.1	6.9	–	3.1	4.3	2.5
7	×	2.3	×	×	2.2	0.3	–	×	×
8	×	1.6	×	0.4	×	0.2	×	–	×
9	×	2.8	×	×	2.8	0.4	×	×	–

* The "×" means that the value does not differ significantly from 1% at 5% significance level

Cluster A	Cluster B	Cluster C
• Entered during period A (1901–1920)	• Entered during period C (1954–1985)	• Entered during period B (1921–1953)
• All disease groups except schizophrenia	• Female entrants	• Male entrants
• Age groups 0–20 and 41–50	• Housewives	• Disease group schizophrenia
• All occupations except housewives	• Age groups 51–60 and 60⁺	• Age groups 21–30 and 31–40

Cluster analysis

We have also performed cluster analysis, in order to look at similarities both between items (subjects) and between variables. In the former case, we classify the observations into groups (clusters) using an appropriate similarity measure and trying to form clusters that are as homogeneous (with respect to that measure) as possible. In the latter, we form the clusters looking at similarities between the different levels of our categorical variables.

The cluster analysis among items classified the entrants into two groups. Gender seems to be the overriding issue in the two-step analysis. The two clusters had 1839 and 1136 observations respectively; the first cluster consists of males only, while in the second we find all 1088 females and 48 males. There seems also to be a clear-cut discrimination for the occupation groups, but this seems to be a consequence of the strong occupation – gender association mentioned earlier. Age groups and disease groups, on the other, do not seem to be well discriminated between clusters, as each of the two clusters possesses a fair proportion of the above groups at each level. One notable exception is Disease group 6: 87% of entrants that were diagnosed in that group fell into the cluster dominated by the male entrants, which confirms the evidence from the odds ratios table.

The second type of clustering we conducted is between variables. A hierarchical approach gave three clusters, and each of three time periods fell into a separate cluster. The profile of entrants into each of the three clusters is given diagrammatically below.[iv]

[iv] *Looking at the forming of clusters at a higher level, we find that the first of these three groups (the one on the left in the table above), which is the largest group and contains a fair mix of entrants of both sexes, can be further sub-divided into five sub-clusters as follows:*

a. Disease groups 3 (neurological syndromes), 5 (neurosis), 6 (personality disorders), 7 (mental retardation), and 9 (unclassified); this sub-group contains persons whose occupation code is mostly 1 (self employed) or 10 (military).

b. Disease group 8 (other non-organic causes). Occupation codes 02, 03, 04, 06 and 08. Age groups 0–20 and 60+.

c. A small sub-group which contains almost exclusively people with occupation code 07 (unqualified workers).

d. This sub-group consists mostly of patients in Disease group 2 (major affective disorders), with age group 51-60 and occupation code 05 (workers of the primary sector of economy).

e. Patients in this sub-group were mostly in Disease group 4 (organic psycho-syndromes), nearly all of them entered the hospital during the first period (1901–1920) and the typical age group in this class is 41–50.

Discussion

The recording of patient diagnoses refers clearly to clinical syndromes that have been proposed by the French and German psychiatry during the period under consideration. The influence of British and American psychiatry emerged only after the Second World War and culminated in the 1970's.

Around World War II we note: a relatively constant rate of admissions from 1941 to 1945, a large increase in 1946 (450 admissions) and then a relatively small fluctuation in admission numbers. The number of hospitalized patients shows a significant reduction in 1942–1943 and then increases steadily. These figures may obscure a large number of deaths from hunger in cities between 1941 and 1944,[17] and in psychiatric institutions of Athens.[18,19]

The fact that in Dromokaiteio, except for the years 1942–1943, there is no major reduction in the total number of patients on care, suggests that those who died from hunger were replaced by new entries. The liberation of Athens in October 1944, was followed by great social upheaval (battles in December 1944), while the whole country was

sliding towards a civil war (1946–1949). These social events rendered the presence of mentally ill in families problematic. In addition two new wings in Dromokaition, opened in 1946, contributed to the increase in admissions.[3]

The statistical analysis of the main parameters of admissions during World War II (age, sex, diagnosis) did not show statistical differences from the entire second period (1921–1953).

We note that after 1985, following our period of study, the reduction in the number of admissions was accelerated as a result of the application of a reform in public psychiatric services.[20]

Regarding the age of the entrants, the preponderance of the socially active groups of ages is expected. A special comment is needed for the younger entrants, aged until 20. Until 1958 there was no child psychiatric hospital in Greece. In this age group we find a child aged 7 (idiotism) and a 10-year old child (psychosis due to degeneration) in 1918. For ages 10–15 years, we have 12 cases – of schizophrenia and epileptic psychosis, while in the main subgroup of 15–20 years of age we have 229 cases; the principal diagnoses are: schizophrenia: 35%, primitive/precocious dementia: 9% and epileptic psychosis 6.1%.

The large majority of female entrants are housewives, and although women tend to enter the hospital at an older age compared with men, the difference is not statistically significant. The main disease groups dominated by women are Groups 2 (major affective disorders) and 5 (neuroses). The gradual rise in the proportion of female admissions is likely to be linked with the increasing abandonment of the traditional characteristics of the Greek society, before we observe a substantial increase in the active employment of women.[v]

Significant changes observed:

- The increase in admissions of women observed in the 1930's, continued steadily thereafter
- The gradual domination of schizophrenia as the most common diagnosis
- In the first 20 years of the 20th century, primitive/precocious dementia is the second most common diagnosis, following the progressive paralysis of the insane. It is interesting to note that in the long history of the institution, the disappearance of some older diagnostic categories followed a slow process, probably related to the presence of older physicians or cases "fitting" better these classic descriptions
- In the "organic syndromes" we observe a relatively low average age of the total sample, 46.4 years. This is due to the presence of many young patients with diagnoses: progressive paralysis of the insane, epileptic psychosis and toxic psychosis. The admission of patients with senile organic syndromes increased significantly only in period C (1954–1985), following the social changes in urban population of Athens
- The main reason that Group 6 (personality disorders) is male-dominated in the 1930's seems to be the addiction to toxic substances as it was the case in the public psychiatric hospital of Athens.[22]

[v] *Official statistics show that women in employment represent 12.7% of the active population in 1907, 16.7% in 1928 and 21.7% in 1951, the percentage increasing steadily.[21] The very large number of women who declared housewives (82% in our sample) does not represent the total female population and probably reflects the presence of individual and family weaknesses or a disease that did not allow them to be engaged in employment.*

Conclusions

The recording of a long series of admissions in Dromokaition psychiatric hospital shows:

The expected dominance of diagnoses classified in the group of schizophrenia. Due to the epidemic of syphilis in the early 20th century, progressive paralysis of the insane has been the leading cause of admissions from 1901 until 1920. The gradual increase of women in the population of the institution seems to reflect the changes in the traditional organization of greek society. The large number of admissions in the years 1941–1946 obscures a large number of deaths from hunger and indicates how major social events can affect the existence of the mentally ill. The increase in admissions of organic syndromes for older patients, after 1954, followed the growth of urban population and the disorganization of traditional greek society. The changes in diagnoses reflect, with a relative time-lag, changes in the prevailing conceptions of European psychiatry, mainly French and German for most of the period we have studied.

Εισαγωγές ασθενών στο Δρομοκαΐτειο Ψυχιατρικό Νοσοκομείο: 1901–1985

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Το Δρομοκαΐτειο ιδρύθηκε το 1887 και είναι το πρώτο ψυχιατρικό νοσοκομείο στην Αθήνα. Οι διαθέσιμες πληροφορίες για τα χαρακτηριστικά των ασθενών που εισάγονταν σε ψυχιατρικά νοσοκομεία στην Ελλάδα, ειδικά για το πρώτο μισό του 20ού αιώνα, είναι σπάνιες. Ο σκοπός της μελέτης είναι να επισημάνει τα χαρακτηριστικά των ασθενών που εισήχθησαν στο νοσοκομείο, αλλά και την επιρροή των ευρωπαϊκών κυρίαρχων απόψεων σχετικά με ψυχικές ασθένειες στην ελληνική ψυχιατρική. Τα δεδομένα των εισαγωγών για δείγμα 3014 ασθενών (20% του συνολικού αριθμού) για την περίοδο 1901–1985 ελήφθησαν μέσω συστηματικής δειγματοληψίας. Τα διαθέσιμα δεδομένα ήταν: ημερομηνία έναρξης, το φύλο, η ηλικία, το επάγγελμα και σύντομο ιατρικό ιστορικό. Οι 56 καταγεγραμμένες διαγνώσεις έχουν ταξινομηθεί σε 9 ομάδες. Στη στατιστική ανάλυση χρησιμοποιήθηκαν περιγραφικές στατιστικές μέθοδοι, συσχετίσεις διπλής κατεύθυνσης, πηλίκο λόγων (σχετικού κινδύνου) και ανάλυση συστάδων, που επέτρεψαν την ανάδειξη των κύριων χαρακτηριστικών των ασθενών. Η υπεροχή των εισαγωγών ανδρών κατά τις πρώτες δεκαετίες του 20ού αιώνα εξισορροπήθηκε σταδιακά. Περίπου το ήμισυ του συνόλου των εισαγωγών σχετίζονται με τη διάγνωση της σχιζοφρένειας. Το ποσοστό των αρρένων ασθενών ήταν σημαντικά υψηλότερο στις διαταραχές προσωπικότητας, ενώ το αντίθετο συνέβη για τις μείζονες συναισθηματικές διαταραχές και τις νευρώσεις. Η διάγνωση της προϊούσας γενικής παράλυσης, συχνή τις πρώτες δεκαετίες του 20ου αιώνα, μειώθηκε σταδιακά και εξαλείφθηκε μετά το 1950. Τα χρόνια του Β΄ Παγκοσμίου Πολέμου αποτελούν μια ιδιαίτερη περίοδο για το ίδρυμα. Οι κοινωνικές αλλαγές, τα κυριότερα ιστορικά γεγονότα και η εξέλιξη των απόψεων για ψυχιατρική περίθαλψη έχουν αφήσει τα ίχνη τους στην φυσιογνωμία των εισαγομένων ασθενών.

Λέξεις ευρετηρίου: Δρομοκαΐτειο Ψυχιατρικό Νοσοκομείο Αθηνών, σχιζοφρένεια, προϊούσα γενική παράλυση, φύλο, επάγγελμα

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Research article
Ερευνητική εργασία

Evaluation of dangerousness of Greek mental patients

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There is a diachronic interest on the evaluation of the risk of violence by mental patients. Difficulties that have been underlined concern the definition of the term dangerousness and the different methods of approaching it. Accurate risk assessments are particularly important for psychiatric patients, with history of violence, in indoor care. The accuracy of predictions can better determine the patients designated as "at risk" for violence and avoid false designations. The aim of this study was to investigate the probability of patients, from several psychiatric units, to become violent after their discharge and over the next three years. We also investigate the predictive validity and accuracy of the HCR-20 in relation to post-discharge outcomes. Two hundred ninety five (295) psychiatric patients, from several psychiatric units, were assessed with the HCR-20, PCL: SV and GAF scales at discharge (using case file data, interviews with the patients and the clinicians of the units, and also information from the collateral informants) and were monitored for violent episodes over the following three years. The study was conducted in two phases: 1st phase: During the last week before discharge. 2nd phase: Every six months, over the following three years. Both the HCR-20 and PCL: SV scales and their subscales are significant predictors of readmission, suicide attempts and violent behavior. The GAF scale had a low positive correlation with the HCR-20 scale. A number of other variables such as duration of hospitalization, previous violent acts, diagnosis, gender, marital status, socioeconomic status, number of previous hospitalizations, were statistically related with failure of re-integration in the community. The results provide a strong evidence base that the HCR-20 is a good predictor of violent behavior in psychiatric patients, following their discharge from psychiatric wards in Greece, and hence can be used by clinicians in routine clinical practice.

Key words: Dangerousness, risk assessment, prediction of violent behavior

Introduction

Dangerousness, in its legal or psychiatric sense, has been always considered as a social threat and as such every developed state endeavored to predict and address it.

In the past 30 years, since the Tarasoff's rule in the USA delegated to psychiatrists the duty to protect society from patients who express threats of gross violence, the assessment of dangerousness for future manifestation of violent behavior has become an integral part of routine mental health practice, which has spread worldwide in varying degrees.[1]

Predicting, the future manifestation of violent behavior is a lengthy and difficult task. Numerous research projects have questioned the efficacy of predicting a future behavior that could be described as dangerous. For many years the scientific community has pointed out difficulties regarding the definition of the term dangerousness and the methodology to approach it. Controversial issues on the term could be ascribed to vagueness, lack of credibility and objectivity criteria and, naturally, to subjective factors.[2,3]

Since the '90s, remarkable progress has been made in the endeavor to predict dangerousness, leading to the development of structured assessment tools (such as the Historical Clinical Risk Assessment-20), that allow a more systematic approach to decision making.[4–6]

The risk of exhibiting violent behavior has not been adequately studied in our country. The purpose of the current study was to investigate: (a) the predictive validity of the HCR-20 dangerousness and PCL: SV psychopathy scales for the manifestation of violent behavior and the successful or not outcome of indoor treatment of Greek mental patients, during a follow-up period of 3 years, and (b) the factors related to future manifestation of violent behavior, which consequently contribute to an unsuccessful outcome (re-hospitalization, aggressive behavior, suicide attempts).

Material and method

Sample

The sample of the current study was 295 patients who received treatment in a psychiatric ward of a general or specialized hospital in the period from 1 April 2007 to 31 March 2008 (table 1).

The patients were assessed before being discharged from the hospital and were monitored every six months for the three years (1 May 2008 to 30 April 2011).

The inclusion criteria were:

- Patients, of both genders, diagnosed with severe mental disorders (according to DSM-IV TRTTM), aged 18 to 70 years
- The current hospitalization had to have taken place either voluntarily or involuntarily

Table 1. Hospital admissions during the period April 2007–March 2008.

No.	*Hospital*	*Admissions**	*Number of participants*	
			N	*(%)*
1.	1st Psychiatric Clinic of the University of Athens-Eginition Hospital	627	98	15.6
2.	Psychiatric Hospital of Attiki "Dafni"	490**	73	14.9
2.	Psychiatric Hospital of Corfu	290	37	12.8
3.	Psychiatric Department of General Hospital "Evangelismos"	430	52	12.0
4.	Psychiatric Department of "Mamatsio" General Hospital of Kozani	303	35	11.6
		Total: 2140	Total: 295	

* Source: Patient Administration Department of Hospital

** From three clinics where the current study was conducted and a total of 1898 admissions for the entire hospital

- To have exhibited some form of violent/aggressive behavior self-or other-directed up until the day of the current hospitalization. This behavior could have been exhibited well in the past and was simply recorded in the patient's case history or it could be recent or even the reason that led to the current hospitalization
- To maintain frequent and regular contact with the collateral informant, appointed by themselves (at least once every three days)
- To have enrolled or not in an outpatient program after being discharged.

The exclusion criteria were:

- Interruption of hospital treatment before its conclusion as requested by the patient or the family
- Disciplinary discharge because of the patient's lack of conformity to ward rules
- Changes in the social situation of the patient during the follow-up period (e.g. moving to a different town), thus losing contact with the collateral informant.

Research tools

The Historical Clinical Risk Assessment-20 scale (HCR-20), which includes a total of 20 items (10 items on case history, 5 items on clinical data and 5 items on managing risk), was used to assess dangerousness.[5,6] Coding is based on a three-point scale 0, 1, 2, according to the certainty of the presence or not of each item's risk factor. The final score ranges between 0 and 40 and allows the determination of dangerousness as low, moderate and high.

Psychopathy elements were assessed using the Psychopathy Checklist: Screening Version (PSC: SV),[7] which comprises two domains of six items each. The first domain includes elements which deal with emotional shallowness and the second with behavioral issues. The scoring, here too, is based on a three-point subscale from 0 to 2. The total score ranges between 0 and 24.

Psychosocial functioning was assessed using the Global Assessment of Functioning Scale (GAF).[8,9] Mental health professionals were specifically trained to administer the tests.

The tests were administered a week before patients were discharged through: (a) private interviews with the patients, (b) communication with the collateral informants, (c) discussions with members of the clinical stuff of the ward and (d) the overall study of the patient's file.

After being discharged, patients and their collateral informants were contacted at the end of each six-month period in order to collect information of a possible unsuccessful outcome. Outcomes deemed unsuccessful were the following: (a) immediate return to a psychiatric unit (1–2 days after being discharged), (b) readmission after being discharged and having resided in the community (2–4 months), (c) repeat of violent/aggressive behavior after being discharged, e.g. suicide attempt, (d) manifestation of some form of violent/aggressive behavior for the first time.

Statistical analysis

The mean, standard deviation (SD) and median values and the interquartile range were used to describe the quantitative variables. The absolute (N) and relative (%) frequencies were used for the description of the qualitative variables. For the association between categorical values Pearson's x^2 test was employed and, whenever necessary, Fisher's exact test. The comparison of quantitative variables between two groups was conducted using the non-parametric Mann-Whitney test. In order to control type I errors, the result of multiple comparisons, the Bonferroni correction was used. To compare scores between measurements the non-parametric Wilcoxon signed-rank test was used. In order to study the relationship between two quantitative variables the Spearman correlation coefficient (r) was used. For the purposes of credibility control Cronbach's a was used. Logarithmic stepwise regression was used to determine independent variables, and odds ratios emerged with 95% of their confidence intervals (95% CI). In order to assess the predictive value of the PCL: SV and HCR-20 scales the ROC curve was used, where-from the area under the curve (AUC) was measured with its 95% confidence interval (CI 95%). Moreover, through the ROC curve analysis the TGF optimal cut-off point was established. For this particular point sensitivity (Se) and specificity (Sp) were calculated. The SPSS 17.0 statistical program was used for the analysis.

Results

The final sample of the project included 295 patients, 159 male and 136 female.

Their mean age was 41.4 years and their majority was single (68.5%), 43.7% of the participants had incomes below €1000, and just over half (51.5%) had completed 12 years of education, 71.5% resided in urban areas and 40.3% were unemployed/had no occupation.

Despite their young age, they reported considerable length of illness. Specifically, 83 individuals (28.1%) had been ill for nearly 20 years. The diagnosis assigned to 46.1% of the participants was schizophrenic/psychotic disorder. Thirty three individuals (11.2%) met the criteria for personality disorder per DSM-IV, while 27 individuals (9.1%) exhibited comorbidity, mainly schizophrenia with personality disorder and 20.7% of the participants were using substances and 22.4% alcohol.

Among the participants, 259 individuals (88.1%) had a previous hospitalization, and 159 (53.9%) had at least one experience of mandatory hospitalization. The form of aggressive behavior most often recorded was violence towards others (66.8%), 26.4% of the participants had attempted suicide in the past. Finally, 20.0% had a history of self-harming and 37.3% of other-harming behavior, in their families.

During the first time of assessment (T0), the participants' mean score value in the HCR-20 dangerousness scale was 28.3 points (±4.4), for the PCL: SV scale was 13.4 points (±4.7), while for the GAF scale was 48.4 (±10.3). In the second assessment the respective values were 29.8 (±3.0) for the HCR-20 and 14.4 (±4.3) for the PCL: SV.

Finally, Cronbach's a reliability coefficient was 0.7 for the summary score of the HCR-20, 0.72 for the Historical scale, 0.65 for the Clinical and 0.71 for the Risk Management.

Out of the 295 patients who were being monitored over the three years, 131 individuals (44.4%) were re-hospitalized, 39.0% were hospitalized on up to three occasions and 5.4% on more than four, 48 individuals (16.3%) had an involuntary hospitalization-25 (8.5%) experienced mandatory hospitalization for the first time. Of the re-hospitalized patients, 18% were admitted during the third six-month period. During the three-year follow-up, 39.0% of the participants were hospitalized 1–3 times. Finally, the most common form of aggressive behavior was towards others (82.4%).

The correlation between the HCR-20 and PCL: SV scales, exhibited significantly positive results (table 2).

Table 2. Spearman correlation coefficients between the HCR-20 and PCL: SV.

		PCL: SV (factor 1)	*PCL: SV (factor 2)*	*Total HCR-20*	*Historical scale*	*Clinical scale*	*Risk management scale*
Total PCL: SV	r	0.94	0.83	0.61	0.68	0.20	0.22
	P	**<0.001**	**<0.001**	**<0.001**	**<0.001**	**0.001**	**<0.001**
PCL: SV (factor 1)	r	1.00	0.60	0.54	0.61	0.10	0.21
	P	.	**<0.001**	**<0.001**	**<0.001**	**0.072**	**<0.001**
PCL: SV (factor 2)	r		1.00	0.57	0.61	0.27	0.20
	P		.	**<0.001**	**<0.001**	**<0.001**	**<0.001**
Total HCR-20	r			1.00	0.86	0.51	0.62
	P			.	**<0.001**	**<0.001**	**<0.001**
Historical scale	r				1.00	0.20	0.26
	P				.	**<0.001**	**<0.001**
Clinical scale	r					1.00	0.34
	P					.	**<0.001**

The significant correlation of the HCR-20 subscales is strong evidence of its structural validity. The HCR-20 and GAF scales had low positive correlation. The ROC curve analysis also revealed statistically significant results regarding the predictive validity of the HCR-20 and PCL: SV scales (table 3).

Table 3. ROC Analysis for the PCL: SV and HCR-20 scales and their subscales

	*AUC (95% CI)**	*p*	*Optimal cut-off*	*Sensitivity (%)*	*Specificity (%)*
Re-hospitalization					
Total PCL: SV	0.57 (0.51–0.64)	**0.033**	14.00	57.25	56.10
PCL: SV (factor 1)	0.57 (0.51–0.64)	**0.037**	8.00	45.04	65.24
PCL: SV (factor 2)	0.56 (0.5–0.63)	0.064			
Total HCR-20	0.63 (0.57–0.69)	**<0.001**	29.00	57.25	64.02
Historical scale	0.59 (0.53–0.65)	**0.008**	15.00	35.88	75.00
Clinical scale	0.60 (0.54–0.66)	**0.003**	8.00	59.54	53.05
Risk management scale	0.59 (0.53–0.66)	**0.006**	9.00	44.27	69.51
Suicide attempts by the time of the initial assessment					
Total PCL: SV	0.62 (0.55–0.7)	**0.001**	16.00	46.15	69.59
PCL: SV (factor 1)	0.61 (0.53–0.69)	**0.003**	9.00	44.87	74.19
PCL: SV (factor 2)	0.60 (0.53–0.68)	**0.006**	8.00	43.59	71.43
Total HCR-20	0.78 (0.73–0.83)	**<0.001**	30.00	62.82	73.73
Historical scale	0.77 (0.71–0.82)	**<0.001**	14.00	73.08	71.43
Clinical scale	0.55 (0.48–0.62)	0.203			
Risk management scale	0.65 (0.58–0.72)	**<0.001**	9.00	50.00	68.20
Present manifestation of violent behavior					
Total PCL: SV	0.66 (0.59–0.72)	**<0.001**	13.00	63.78	62.73
PCL: SV (factor 1)	0.66 (0.6–0.72)	**<0.001**	8.00	47.03	73.64
PCL: SV (factor 2)	0.61 (0.54–0.67)	**0.002**	8.00	36.76	74.55
Total HCR-20	0.68 (0.62–0.74)	**<0.001**	30.00	44.86	79.09
Historical scale	0.65 (0.58–0.71)	**<0.001**	15.00	35.68	80.00
Clinical scale	0.60 (0.53–0.66)	**0.006**	8.00	57.84	56.36
Risk management scale	0.63 (0.57–0.7)	**<0.001**	9.00	43.24	74.55
Suicide attempts during follow-up**					
Total PCL: SV	0.53 (0.37–0.69)	0.670			
PCL: SV (factor 1)	0.56 (0.41–0.72)	0.420			
PCL: SV (factor 2)	0.54 (0.4–0.68)	0.603			
Total HCR-20	0.68 (0.56–0.8)	**0.022**	29.00	60.00	67.82
Historical scale	0.57 (0.43–0.7)	0.380			
Clinical scale	0.62 (0.51–0.74)	0.107			
Risk management scale	0.70 (0.57–0.84)	**0.009**	10.00	46.67	84.65

* Area under the curve (95% CI)
** No past occurrences

Progressive increase of the HCR-20 scale score was found to significantly increase the probability of readmission to the psychiatric unit of a hospital (99.1%), the probability of successful suicide (70%) and aggressive behavior (89%), (tables 4–6).

Single patients were found to have 64% greater probability of being re-hospitalized (table 5). Indeed, those who were single, divorced or widowed had 54% greater probability of successful suicide (table 4). Female patients had more attempts compared to male patients and thus had greater rates of readmission. Additionally, they had 87% greater probability of exhibiting aggressive behavior during hospitalization in comparison to the male patients (table 6).

History of prior manifestation of violent behavior and a history of other-directed violence within the family were strong predictive factors of the probability of re-hospitalization by 44% and 63% respectively. The number of prior hospitalizations was an additional predictive factor (table 5).

Of the diagnostic categories, the schizophrenia/psychotic disorder displayed the lowest rate (68%) of any form of suicide attempt. Patients with depression and personality disorder were found to have made the most attempts (table 7).

As hospitalization got longer, the probability of a successful attempt to suicide or the manifestation of violent behavior diminished, and consequently the possibility of readmission in the second assessment (table 6).

Patients who had been ill for more than 9 years were found to be 56% less likely to attempt suicide in the future, while those who had been hospitalized for 3 or more times had the highest readmission rates (54.6%), (tables 7, 8).

Individuals of higher socioeconomic status (74.7%) displayed a greater propensity for exhibiting aggressive behavior or being re-hospitalized in comparison to individuals of lower socioeconomic status (table 9).

Finally, it was found that the probability of hospitalization decreased as the Global Assessment of Functioning scale score increased (table 5).

Discussion

The evaluation of dangerousness of psychiatric patients depends mainly on the features of the group of patients under study. The application of valid psychometric instruments ensure that dangerousness can be approached with significant accuracy.

The current study, the first in Greece, tests the validity of the HCR-20 scale as a whole and its subscales. We have studied, for patients who were followed-up for three years, their post-discharge progress and the possibility of exhibiting violent behavior (e.g. successful suicide, aggressive behavior).

The positive correlation between the HCR-20 and PCL: SV scales, and their ability to predict the future manifestation of violent behavior is confirmed by numerous research studies, which show the HCR-20′s scores to be a significant predictive factor of readmission and self/collateral reporting of violent behavior.[10–13] Moreover, some researchers admit the predictive superiority of the HCR-20 in comparison to the PCL: SV.[14]

The overall score of the HCR-20 and its progressive increase proved to be the best predictive factor and was followed by the H (Historical) and R (Risk Management) subscales. The majority of studies report the H subscale to be particularly useful for predicting any form of violent incidents during hospitalization and mostly for predicting verbal violence.[15]

Regarding the C (clinical) and R (risk management) subscales, we have noted that their scores decrease as the patients stay longer in the hospital. For the majority of patients, longer hospitalizations have probably a reinforcing effect on the observance of a regular treatment and on the remission of symptoms. Longer contact with the patients probably allows the stuff to adopt more elaborated strategies regarding dangerousness, i.e. medical treatment of the acute phase of a mental illness and elaboration of strategies for social re-integration. Indeed, the stuff can focus on specific behavioral treatments, control

Table 4. Multivariate logarithmic regression in relation to successful suicide.

		OR (95% CI)	*p*
Total HCR-20		1.09 (1.02–1.17)	**0.009**
GAF		0.96 (0.93–0.98)	**0.002**
		1.00*	
Marital status	Married-Divorced-Widowed-Single	3.64 (1.98–6.69)	**<0.001**
	0	1.00	
Number of aggressive acts (at time T0)	1–3	2.38 (1.3–4.36)	**0.005**
	>3	6.06 (2.77–13.24)	**<0.001**
History other-directed behavior within the family	No	1.00	
	Yes	2.63 (1.51–4.59)	**0.001**

*Indicates control category

Table 5. Multivariate logarithmic regression in relation to the possibility of re-hospitalization.

		OR (95% CI)	*p*
Total HCR-20 (during initial assessment T0)		1.30 (1.19–1.41)	**<0.001**
Marital status	Married-Divorced-Widowed-Single		
		1.00*	
		2.54 (1.29–5.01)	**0.007**
Duration of Illness (years)	<3	1.00	
	4–9	0.59 (0.27–1.28)	0.181
	>9	0.44 (0.2–0.96)	0.040
Schizophrenia/Psychotic disorder	No	1.00	
	Yes	0.32 (0.17–0.61)	**<0.001**

* Indicates control category

Table 6. Multivariate logarithmic regression in relation to the manifestation of aggressive behavior.

		OR (95% CI)	*p*
Total PCL: SV (during initial assessment T0)		1.09 (1.02–1.18)	**0.017**
Total HCR-20 (during initial assessment T0)		1.11 (1.03–1.2)	**0.007**
Gender	Male		
	Female	1.87 (1.11–3.16)	**0.019**
Duration of Current Hospitalization (days)	20–40		
	41–80	0.84 (0.44–1.61)	0.604
	>80	0.39 (0.2–0.76)	**0.006**

* Indicates control category

Table 7. Correlation of participants to manifestation of self-destruction attempts

		Suicide attempt manifestation (time T0)				
		No		*Yes*		*p* Pearson's x^2 test
Diagnosis		*N*	*(%)*	*N*	*(%)*	
Schizophrenia/Psychotic disorder	No	84	59.6	57	40.4	<0.001
	Yes	133	86.4	21	13.6	
Substance-related disorders	No	215	74.1	75	25.9	0.117*
	Yes	2	40.0	3	60.0	
Organic mental disorder	No	211	73.0	78	27.0	0.346*
	Yes	6	100.0	0	0.0	
Bipolar disorder	No	188	72.6	71	27.4	0.310
	Yes	29	80.6	7	19.4	
Depression	No	192	77.7	55	22.3	**<0.001**
	Yes	25	52.1	23	47.9	
Personality disorder	No	196	79.4	51	20.6	**<0.001**
	Yes	21	43.8	27	56.3	
Mental retardation	No	213	73.4	77	26.6	1.000*
	Yes	4	80.0	1	20.0	
Obsessive compulsive disorder	No	207	72.9	77	27.1	0.299*
	Yes	10	90.9	1	9.1	
Comorbidity	No	213	73.7	76	26.3	0.657*
	Yes	4	66.7	2	33.3	
Type of schizophrenia/Psychotic disorder	Undifferentiated	85	60.7	55	39.3	**<0.001***
	Paranoid	10	100.0	0	0.0	
	Residual	41	80.4	10	19.6	
	Schizoaffective disorder	14	82.4	3	17.6	
	Delusional disorder	8	61.5	5	38.5	
	Psychotic disorder NOS	53	91.4	5	8.6	
	Schizophreniform disorder	2	100.0	0	0.0	
	Brief psychotic disorder	4	100.0	0	0.0	
Duration of illness (years)	<3	45	68.2	21	31.8	**0.045**
	4-9	70	68.0	33	32.0	
	>9	102	81.0	24	19.0	
Marital status	Single	145	71.7	57	28.2	**0.017**
	Married/Divorced/ Widowed	72	77.4	21	22.6	
Gender	Male	128	80.5	31	19.5	**0.003**
	Female	89	65.4	47	34.6	

*Fisher's exact test

of impulses and emotions, hence increase insight and the probability of assent.[16]

Additionally, the results of the C and R subscales may also be used to determine specific intervention goals and to measure therapeutic progress, since they may be repeated.[17] The assessment of the clinical (C) and risk management (R) items contributes to the evaluation of the impact of the employed interventions, of the progress made and of any changes made to the therapeutic goals.[18]

Table 8. Correlation of participants to re-hospitalization

		Re-hospitalization				p Pearson's x^2 test
		No		Yes		
		N	(%)	N	(%)	
Gender	Male	100	62.9	59	37.1	**0.006**
	Female	64	47.1	72	52.9	
Number of hospitalizations	0	24	68.6	11	31.4	**0.016**
	1–3	91	60.3	60	39.7	
	>3	49	45.4	59	54.6	
Marital status	Single	129	63.9	73	36.1	**<0.001**
	Married	45	77.6	13	22.4	
	Divorced/Widowed	26	74.3	9	25.7	
History of self-harming behavior in the family	No	139	58.9	97	41.1	**0.022**
	Yes	25	42.4	34	57.6	
History of other-harming behavior in the family	No	122	65.9	63	34.1	**<0.001**
	Yes	42	38.2	68	61.8	
Number of aggressive acts (prior to T0)	0	89	74.2	31	25.8	**<0.001**
	1–3	60	53.1	53	46.9	
	>3	15	24.2	47	75.8	

Table 9. Correlation of participants to manifestation of aggressive behavior

		Manifestation of aggressive behavior				p Pearson's x^2 test
		No		Yes		
Diagnosis		N	(%)	N	(%)	
Schizophrenia/Psychotic disorder	No	41	29.1	100	70.9	**0.005**
	Yes	69	44.8	85	55.2	
Personality disorder	No	102	41.3	145	58.7	**0.001**
	Yes	21	43.8	27	56.3	
Duration of current hospitalization (days)	20–40	26	30.6	59	69.4	**0.013**
	41–80	36	32.1	76	67.9	
	>80	25	25.5	73	74.5	
Socioeconomic status	Higher	11	25.6	32	74.4	**0.006**
	Middle	38	30.9	85	69.1	
	Lower	61	47.3	68	52.7	
Gender	Male	68	42.8	91	57.2	**0.035**
	Female	42	30.9	94	69.1	

High scores in the HCR-20 and PCL: SV scales were recorded for those of our patients who had attempted suicide and/or had exhibited aggressive behavior by the first assessment (T0). Cut-off score of 29 in the HCR-20 scale –as established in our study– should be taken into consideration by the clinician. However, some researchers[19] report a cut-off point of 27 as useful.

The low positive correlation between the HCR-20 and GAF scales could be explained within the context of a possible suicide attempt and in relation to awareness of the illness and its consequences. Literature observes that clinical improvement is not the juncture that reduces suicide risk. The improvement of mental symptoms may lead to awareness of the illness and a consequent risk of suicide, as the result of painful insight, sometimes for the patient's lifetime.[20]

In regard to the marital status of our patients, those who were single, divorced or widowed had higher rates of exhibiting violent behavior; a fact which confirms the prevalent perception that marriage or a stable relationship acts as a deterrent to violent behavior.[5,21–26]

The predominance of female patients, in our sample, regarding suicide attempts and the manifestation of aggressive behavior confirms other researchers who also report similar scores.[27–29] However, some report that the rate of violence between mental health patients are probably similar for both genders.[30–32] Yet others report that mental illness reduces the gender gap in the manifestation of violence, especially during hospitalization,[33–35] a fact ascertained in our study as well.

Literature reports that certain diagnoses of Axis I and II are related to the risk of violence and successful suicide, as well as specific symptom clusters. For Axis I particularly, major depression and schizophrenia hold a primary role especially when they co-occur with paranoia and compelling hallucinations and disorders due to the use of substances. In Axis II, greater interest lies in antisocial and borderline personality disorders.[36] The risk of suicide has been underlined both during the early onset of depression, as well as for patients experiencing their first psychotic episode. Particularly in schizophrenia, suicide is the primary cause of premature death and remains so for the patient's entire lifetime. In the current study, patients with delusional disorder or undifferentiated type of schizophrenia, and patients with depression and personality disorders had higher occurrences of suicide attempts.

Additionally, the co-occurrence of multiple psychiatric disorders or comorbidity is related to increased risk.[37] A small rate in our study fell under this group (9.1%) but was not considered representative enough to reach definitive conclusions.

The factors implicated in increased risk of exhibiting future violent behavior include history of prior violence, ease of access to dangerous objects or substances, personality disorder, young age, low socioeconomic status etc. In the current study, only age was not found to have a significant role; however, it was observed, for the first time, that individuals of higher socioeconomic status exhibited high rates of aggressive behavior during their hospitalization.

In conclusion, we can say that the undoubtfull prediction of a violent act remains very difficult. The HCR-20 scale provides data which can aid clinical judgment, limits subjective perception and contributes to the management of future risk.

We can consider as a limitation of our study that relied on the diagnoses supplied by the medical stuff, without resorting –in the most cases– to the use of diagnostic tools. Possibly, the use of diagnostic tools would alter the results, especially in axes I and II. Also, the absence of use of diagnostic scales, such as Positive and Negative Syndrome Scale (PANSS), which would provide a more comprehensive evaluation of clinical condition of the patients.

Suggestions for future research include in-depth study of how the items in each subscale of the HCR-20 are related within the context of risk, the use of the HCR-20 in different patient groups and the consequent re-evaluation of our conclusions, in different clinical contexts.

Εκτίμηση της επικινδυνότητας Ελλήνων ψυχικά ασθενών

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Η πιθανότητα εκδήλωσης βίαιης συμπεριφοράς από ψυχικά ασθενείς αποτελεί διαρκές αντικείμενο προβληματισμού. Ένα άλλο ζήτημα που απασχόλησε ιδιαίτερα τους ειδικούς, ήταν και ο προσδιορισμός της έννοιας της επικινδυνότητας. Τα σημαντικότερα σημεία σύγκλισης γύρω από την έννοια της επικινδυνότητας περιλαμβάνουν μεταξύ άλλων τα εξής: (α) Παρατηρείται διεθνώς, σημαντική ανομοιογένεια και πολυμορφία στους ορισμούς και τις χρήσεις της έννοιας που διαθέτει σημαντική ευρύτητα. (β) Αναφέρεται στη δυνατότητα έκφρασης στο μέλλον βίαιης-επικίνδυνης συμπεριφοράς. (γ) Οι εμπλεκόμενοι επιστημονικοί κλάδοι (νομικοί, επαγγελματίες ψυχικής υγείας κ.ά.) της προσδίδουν διαφορετική διάσταση και την προσεγγίζουν με διαφορετικές μεθόδους. (δ) Καθίσταται ελαστική, αόριστη με σοβαρά ζητήματα που αφορούν στην εκτίμησή της, λόγω ασαφειών, έλλειψης επαρκών κριτηρίων αξιολόγησης και παρουσίας υποκειμενικών παραγόντων. Οι ακριβείς εκτιμήσεις της βίαιης συμπεριφοράς είναι ιδιαίτερα σημαντικές για τους ψυχιατρικούς ασθενείς με ιστορικό βίας, καθώς στην απόφαση για το εξιτήριό τους, βαραίνει κυρίως η πιθανότητα πρόκλησης βλάβης τόσο στους ίδιους όσο και σε άλλους. Η παρούσα μελέτη είχε ως σκοπό να εκτιμήσει την πιθανότητα σε διακόσιους ενενήντα πέντε (295) ασθενείς που νοσηλεύτηκαν σε κάποιο ψυχιατρικό τμήμα γενικού ή ειδικού νοσοκομείου να εκδηλώσουν βίαιη συμπεριφορά. Ειδικότερα εξετάστηκε η προβλεπτική αξιοπιστία και εγκυρότητα της κλίμακας HCR-20 σε σχέση με την πορεία των ασθενών μετά την έκδοση εξιτηρίου. Η αξιολόγηση έγινε με τη συμπλήρωση των κλιμάκων HCR-20, PCL:SV και GAF. Χρησιμοποιήθηκαν οι ατομικοί φάκελοι, συνεντεύξεις και πληροφορίες από τους έμμεσους πληροφοριοδότες. Οι ασθενείς αυτοί παρακολουθήθηκαν για τη μελλοντική εκδήλωση βίαιης συμπεριφοράς (αποτυχημένη έκβαση) για τα επόμενα τρία χρόνια μετά το εξιτήριο. Ως αποτυχημένη έκβαση θεωρήθηκε η επανεισαγωγή λόγω βίαιης συμπεριφοράς, ή επίτευξης απόπειρας αυτοκτονίας ή εκδήλωσης κάποιας μορφής επιθετικής συμπεριφοράς. Η μελέτη πραγματοποιήθηκε σε δύο φάσεις: 1η φάση: Μία εβδομάδα πριν το εξιτήριο έγινε η λήψη των δημογραφικών, ατομικών και οικογενειακών στοιχείων και δόθηκαν οι κλίμακες HCR-20, PCL:SV και GAF. 2η φάση: Στο τέλος κάθε εξαμήνου, καθόλη τη διάρκεια των τριών χρόνων, γινόταν λήψη κλινικών στοιχείων και επίδοση των προαναφερόμενων κλιμάκων. Πιθανή επόμενη νοσηλεία (αποτυχημένη έκβαση) κατά τη διάρκεια της μετα-παρακολούθησης αποτέλεσε τον δεύτερο χρόνο της έρευνας. Τόσο η HCR-20 όσο και η PCL:SV και οι υποκλίμακές τους, αποδείχτηκαν ισχυροί προβλεπτικοί παράγοντες αναφορικά με τις πιθανές επανεισαγωγές, την επιτυχή απόπειρα αυτοκτονίας και εκδήλωση επιθετικής συμπεριφοράς. Μια σειρά άλλων παραγόντων όπως η οικογενειακή κατάσταση, το φύλο, το ιστορικό προηγούμενης εκδήλωσης βίαιης συμπεριφοράς, η διάγνωση, ο αριθμός προηγούμενων νοσηλειών, το ιστορικό αυτο- και ετεροκαταστροφικής συμπεριφοράς στην οικογένεια, ο χρόνος νοσηλείας, η κοινωνικο-οικονομική κατάσταση βρέθηκαν να σχετίζονται θετικά με τον κίνδυνο εκδήλωσης βίαιης συμπεριφοράς. Τα αποτελέσματα της έρευνας συνάδουν με αυτά πολλών άλλων ερευνητικών εργασιών και συνηγορούν πως η κλίμακα HCR-20 μπορεί τελικά να χρησιμοποιηθεί και στη χώρα μας, ως ένα αξιόπιστο εργαλείο αξιολόγησης του κινδύνου για ψυχικά ασθενείς που νοσηλεύονται ή διαβιούν στην κοινότητα.

Λέξεις ευρετηρίου: Επικινδυνότητα, εκτίμηση κινδύνου, πρόβλεψη βίαιης συμπεριφοράς

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Research article
Ερευνητική εργασία

Relationship of intensity and special characteristics of migraine to depressive and anxious features

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Mood and pain are interrelated to each other in a mutual and complex manner. Patient populations in headache clinics exhibit more emotional disturbance than general practice patients. Nonetheless, the degree of psychological illness among headache patients is less than maybe found in psychiatric outpatients. However, it is a fact that several psychiatric disorders appear to be comorbid with primary headache syndromes such as migraine. Still, prospective standardized studies are sparse. We aimed to investigate whether migraine per se or specific migraine characteristics are associated to depression and anxiety. In a single center study (Department of Neurology of the University of Athens) migraineurs were asked for several headache features such as pain intensity, attack frequency, average attack duration, prodromal symptoms and the presence of aura. We assessed 50 consecutive headache patients who were referred to our headache outpatient clinic. Patients diagnosed with non-migraine syndromes, mixed non-migraine and migraine syndromes, or patients with previously diagnosed systemic disease known to precipitate psychiatric disorders (such as systemic lupus erythematodes) were excluded from the study. Furthermore, we did not include any subjects who were already on antidepressive or other psychiatric medication. Twenty four patients met the inclusion criteria. The data were then correlated with scores obtained by the Beck Depression Inventory and the Hamilton's scales for Depression and Anxiety. Our results showed an increased frequency of mild and moderate depression compared to what was expected from the normal population which is in line with past observations on headache patients. In an analogous manner, mild and moderate anxiety appeared more frequently among migraineurs than healthy subjects. However, we did not find any significant relation between depression or anxiety and parameters such as pain intensity, monthly attack frequency, attack duration, presence or absence of aura, appearance of pre-ictal prodromal symptoms and migraine career duration (age of assessment minus age of migraine onset). These findings suggest that migraine, although often comorbid with depression and anxiety, has no specific headache characteristics causally related to mood abnormalities. Larger samples will be required in future studies to address the question of a link between more specific mood and mental disturbances with primary headache syndromes.

Key words: Migraine, primary headaches, depression, anxiety

Introduction

It is widely accepted that emotional disorders promote pain and pain promotes emotional disorders. Patient populations in headache clinics exhibit more emotional disturbance than general practice patients. Nonetheless, the degree of psychological illness among headache patients is less than maybe found in psychiatric outpatients.[1]

An interesting finding is that certain features of the abnormal sensory processing prevalent among migraineurs proved to be manifestations of concomitant depressivity.[2] The comorbidity of headache and depression might suggest commonalities in the pathophysiology of these disorders, in particular a dysfunction of the serotoninergic system.[3] This fact is also reflected by the more or less successful use of antidrepressants with serotoninergic mode of action in headache prophylaxis.[4]

Although the evidence of the association of headache with mood abnormalities is robust, studies on the correlation of specific headache characteristics with depression and anxiety are sparse.[5]

In the present study we investigated the link between specific migraine features such as pain intensity, the presence of aura and mean attack duration and mood abnormalities measured by standard questionnaires.

Material and method

Three questionnaires were devised as the basic instruments of the survey: The Beck Depression Inventory (BDI),[6] the Hamilton Anxiety Scale (HAM-A)[7] and the Hamilton Depression Rating Scale (HAM-D).[8] Migraine was diagnosed according to the Second Edition of the International Classification of Headache Disorders.[9] We assessed 50 consecutive headache patients who were referred to our headache outpatient clinic. Patients diagnosed with non-migraine syndromes, mixed non-migraine and migraine syndromes, or patients with previously diagnosed systemic disease known to precipitate psychiatric disorders (such as systemic lupus erythematodes) were excluded from the study. Furthermore, we did not include any subjects who were already on antidepressive or other psychiatric medication. All patients gave written informed consent for participation in the study which was conducted in accordance with the Declaration of Helsinki and approved by the Ethics Committee of the Department of Neurology of the University of Athens. Beside the above mentioned psychometric tests, headache characteristics were obtained by one neurologist who interviewed the patients. The parameters under study were: Age of migraine onset, migraine "career" (age at the time of assessment minus are of migraine onset), average migraine attack frequency (events per month) in the last year, average migraine intensity-categorial (three-scaled variable: mild, moderate, severe), average migraine intensity-continuous (according to the visual analog scale-VAS), average attack duration, presence or absence of aura, presence or absence of prodromal symptoms (such as irritability, excessive sleepiness, craving for certain food, altered mood, depression or euphoria, fatigue, yawning neck muscle stiffness, dizziness, hot ears, constipation or diarrhoea, increased or decreased urination and other visceral symptoms),[10] and the level of education (years of education).

Data analysis was performed using linear regression analysis or analysis of variance (ANOVA) were appropriate. Significance was set to 0.05.

Results

Twenty four migraine patients (21 females, age range 21 to 69 years) met the criteria presented in Methods and took part in the study. Patient data and clinical characteristics are given in table 1. All migraineurs had concordant results in the BDI, the HAM-D and the HAM-A scale. Linear regression analysis showed a significant correlation between BDI and HAM-D (R^2=0.227, F= 5.585, $p<0.05$), BDI and HAM-A (R^2= 0.202, F= 4.818, $p<0.05$) and HAM-D and HAM-A (R^2= 0.529, F= 22.429, $p<0.001$). Mean BDI score was 8.2 (±6.4) (range 0–23) and the majority of the patients were categorized in the lowest level of depression (low level depression: 86.4%, moderate depression: 13.6%, significant depression: 0%) (table 2). On the HAM-A scale subjects scored on average 8.9 (±8.0) (range 0–29) and most of them were categorized as normal (normal: 73.9%, mild anxiety: 17.4%, moderate anxiety: 8.7%, significant anxiety: 0%) (table 3). Finally, the mean HAM-D score was 7.1 (±4.6) (range 0–21) and most migraineurs fell in the category of "normal" (normal: 54.5%, mild depression: 36.5%, moderate depression: 4.5%, severe depression: 4.5%, very severe depression: 0%) (table 4) .

Table 1. Patient's demographic and clinical characteristics

Number of migaineurs	24
Female gender	21 (87.5%)
Migraine with aura	6 (25%)
Prodromal symptoms	5 (20.8%)
Age range (years)	21–69 (mean: 44.6, SD: 12.7)
Education (years)	6–23 (mean: 13.4, SD: 4.6)
Age of migraine onset (years)	7-36 (mean: 18.3, SD: 7.6)
Attack frequency (episodes per month)	0.33–25 (mean: 5.1, SD: 5.2)
Mean attack duration (hours)	2–120 (mean: 27.3, SD: 26.6)
Attack intensity	low=0 (0%), moderate=7 (29.2%), high=17 (70.8%)
VAS	5–10 (mean: 7.5, SD: 1.7)

Table 2. BDI score and disease severity categorization (N=22). Low level depression: 0–16, moderate depression 17–30, significant depression ≥31.

Low level depression	*Moderate depression*	*Significant depression*
19 (86.4%)	3 (13.6%)	0 (0%)

Table 3. HAM-A score and disease severity categorization (N=23). Normal: 0–13, mild anxiety 14–17, moderate anxiety 18–24, significant anxiety ≥25.

Normal	*Mild anxiety*	*Moderate anxiety*	*Significant anxiety*
17 (73.9%)	4 (17.4%)	2 (8.7%)	0 (0%)

BDI score was not significantly affected by average pain intensity during an attack [ANOVA: NS (non significant)], the presence or absence of aura (ANOVA: NS) or other prodromal symptoms (ANOVA: NS). The same was true for HAM-A scores (pain intensity ANOVA: NS, prodromal symptoms ANOVA: NS, aura ANOVA: NS) and HAM-D scores (pain intensity ANOVA: NS, prodromal symptoms ANOVA: NS, aura ANOVA: NS).

The lifetime duration of migraine (migraine career) had no effect on the BDI (linear regression, R^2=0.043, NS), the HAM-A (R^2=0.001, NS) or the HAM-D scale (R^2=0.048, NS). No effect showed also the reported level of education (for BDI: R^2=0.033, NS, for HAM-A: R^2=0.030, NS and for HAM-D: R^2=0.085, NS).

We also found no influence of the age of migraine onset (for BDI: R^2=0.002, NS, for HAM-A: R^2=0.040, NS ,and for HAM-D: R^2=0.029, NS).

Finally, neither attack frequency, nor attack average duration or intensity judged on the visual analog scale affected significantly the scores of BDI (frequency: R^2=0.030, NS, duration: R^2=0.073, NS and VAS: R^2=0.023, NS), HAM-A (frequency: R^2=0.092, NS, duration: R^2=0.072, NS and VAS: R^2=0.052, NS) and HAM-D (frequency: R^2=0.005, NS, duration: R^2=0.000, NS and VAS: R^2=0.001, NS).

Discussion

The clinical impression of migraineurs is often considered as anxious, depressive, neurotic or even hostile and rigid, although these features were not obtained by systematic studies.[11] There are convincing data supporting a comorbidity of depression and anxiety with migraine.[12–14] More detailed analyses suggested that the presence of neuroticism, as evaluated with the Eysenck Personality Questionnaire, might be more critical when considering psychiatric comorbidity in migraine.[15] Still, mood and mental abnormalities have not been systematically correlated with the core characteristics of migrainous pain.

In this study using the scoring on BDI and HAM-D we found a slightly increased frequency of mild and moderate depression compared to what was expected from the normal population[16]which is in line with past observations on headache patients.[12–14] This could point to a biological factor predisposing for both migraine and depression. Alternatively, the slightly increased depressivity indices in migraineurs could be the result of long standing suf-

Table 4. HAM-D score and disease severity categorization (N=22). Normal: 0–7, mild depression: 8–13, moderate depression: 14–18, severe depression: 19–22, very severe depression: ≥23.

Normal	*Mild depression*	*Moderate depression*	*Severe depression*	*Very severe depression*
12 (54.5%)	8 (36.4%)	1 (4.5%)	1 (4.5%)	0 (0%)

fering from chronic headaches, and could be related to disease duration, intensity and attack frequency. In an analogous manner, mild and moderate anxiety appeared more frequently among migraineurs than healthy subjects.[17] We further examined the association of specific features of migraine attacks to depression and anxiety. We did not find any significant relation between depression or anxiety and parameters such as pain intensity, monthly attack frequency, attack duration, presence or absence of aura, appearance of pre-ictal prodromal symptoms and migraine career duration (age of assessment minus age of migraine onset). Thus, although our sample as a whole exhibited slightly increased BDI, HAM-D and HAM-A scores, those patients that scored higher had no differences in any of the analyzed specific headache parameters. A possible interpretation is that migraine is comorbid with depression and anxiety in a categorial yes-or-no manner without showing a monotonous quantitative correlation between core features such as pain intensity or attack frequency with mood abnormalities. The lack of association of migraine features with mood favors the hypothesis of comorbidity and may serve as an argument against the hypothesis of depression emerging secondary to a long standing, intense, migraine career. It should be noted, however, that our results are based on a rather small sample. Hence, in order to verify the lack of correlation found in our analysis in a statistical robust manner, larger samples might be necessary. Nonetheless, the reported non significant results did not display any obvious trend. As can be derived from the results of Radat et al,[18] it is difficult to find robust prospective studies on this topic for comparison. These authors studied retrospectively 87 headache patients looking on depression and generalized anxiety among other psychiatric disorders. They clearly demonstrated that in retrospective analyses the International Classification Criteria for Headache Disorders (second edition)[9] are not strictly applied, a fact that significantly hampers causative comparisons between headache features and mood abnormalities.

The main weakness of our study was the relatively small sample size, partly dictated by the trade-off between detailed migraine feature assessment and the number of patients willing to participate and complete the study. Clearly, larger samples will be required in future studies to address the question of a link between more specific mood and mental disturbances such as anhedonia, coping difficulties and personality profiles[19] on the one side and primary headache syndromes on the other side.

Η σχέση της έντασης και των ειδικών χαρακτηριστικών της ημικρανίας με καταθλιπτικά και αγχώδη στοιχεία

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Η διάθεση και ο πόνος αλληλοεξαρτώνται και αλληλεπιδρούν με έναν σύνθετο τρόπο. Ο πληθυσμός των ασθενών που επισκέπτεται ειδικά ιατρεία κεφαλαλγίας παρουσιάζει μεγαλύτερο επιπολασμό διαταραχών διάθεσης σε σύγκριση με ασθενείς γενικών εξωτερικών ιατρείων. Ωστόσο, η βαρύτητα ψυχιατρικών νοσημάτων σε κεφαλαλγικούς ασθενείς φαίνεται ότι είναι σαφώς χαμηλότερη εάν συγκριθεί με τη βαρύτητα νόσου ασθενών σε αμιγώς ψυχιατρικά εξωτερικά ιατρεία. Είναι εντούτοις γεγονός ότι πλήθος ψυχιατρικών διαταραχών παρουσιάζουν συννοσηρότητα με πρωτοπαθή κεφαλαλγικά σύνδρομα όπως η ημικρανία. Ωστόσο ελεγχόμενες τυχαιοποιημένες μελέτες με αυτό το αντικείμενο σπανίζουν. Ο σκοπός της παρούσας εργασίας ήταν να μελετήσουμε εάν η ημικρανία καθ’

αυτή αλλά και εάν συγκεκριμένα ημικρανικά χαρακτηριστικά σχετίζονται με κατάθλιψη ή/και άγχος. Στη μονοκεντρική αυτή μελέτη (Ειδικό Ιατρείο Κεφαλαλγίας της Νευρολογικής Κλινικής του Πανεπιστημίου Αθηνών), ημικρανικοί ασθενείς βαθμολογήθηκαν βάσει τυποποιημένων ερωτηματολογίων ως προς παραμέτρους όπως ένταση του ημικρανικού πόνου, μηνιαία συχνότητα κρίσεων, μέση διάρκεια κρίσης, πρόδρομα συμπτώματα και παρουσία αύρας. Αξιολογήθηκαν 50 διαδοχικοί ασθενείς που είχαν παραπεμφθεί στο ειδικό ιατρείο κεφαλαλγίας της κλινικής μας. Ασθενείς που εν τέλει έλαβαν άλλες διαγνώσεις όπως μη-ημικρανική κεφαλαλγία, μικτή ημικρανική και μη-ημικρανική κεφαλαλγία, ή ασθενείς με συστηματικά νοσήματα που είναι γνωστό ότι προδιαθέτουν για κεφαλαλγίες (όπως ο ερυθηματώδης λύκος) αποκλείσθηκαν από τη μελέτη. Τέλος δεν συμπεριελήφθησαν ασθενείς που ελάμβαναν αντικαταθλιπτική ή άλλη ψυχιατρική αγωγή. Εικοσιτέσσερεις ασθενείς πληρούσαν τα κριτήρια και συμπεριελήφθησαν στις αναλύσεις. Τα δεδομένα συσχετίσθηκαν με τις βαθμολογίες της κλίμακας κατάθλιψης του Beck, της κλίμακας άγχους του Hamilton και της κλίμακας κατάθλιψης του Hamilton. Τα αποτελέσματά μας κατέδειξαν αυξημένη συχνότητα ήπιας έως μέτριας κατάθλιψης σε σύγκριση με την αναμενόμενη συχνότητα από τον γενικό πληθυσμό, εύρημα που ήταν σύμφωνο με παλαιότερες μελέτες. Αντίστοιχα, αυξημένη συχνότητα ήπιου και μέτριου άγχους αναδείχθηκε στους ημικρανικούς ασθενείς. Εντούτοις, δεν βρέθηκε καμία σημαντική συσχέτιση μεταξύ κατάθλιψης ή άγχους από τη μία πλευρά και παραμέτρων όπως ένταση του ημικρανικού πόνου, μηνιαία συχνότητα κρίσεων, διάρκεια κρίσης, παρουσία ή απουσία αύρας, εμφάνισης πρόδρομων συμπτωμάτων και ημικρανική «καριέρα» (ηλικία κατά την εξέταση μείον ηλικία έναρξης της νόσου). Το κύριο αποτέλεσμα ήταν ή απουσία οποιασδήποτε σημαντικής συσχέτισης των ημικρανικών παραμέτρων με τις μετρήσεις κατάθλιψης και άγχους. Τα ευρήματα αυτά υποδεικνύουν ότι η ημικρανία, πέραν της τεκμηριωμένης συννοσηρότητας με κατάθλιψη και άγχος, δεν παρουσιάζει ειδικά ημικρανικά χαρακτηριστικά σχετιζόμενα αιτιακά με τη διαταραχή της διάθεσης. Μελλοντικά είναι σκόπιμο να αναλυθούν μεγαλύτερα δείγματα προκειμένου να τεκμηριωθεί πιθανή συσχέτιση μεταξύ πιο συγκεκριμένων ψυχιατρικών διαταραχών με διάφορα πρωτοπαθή κεφαλαλγικά σύνδρομα.

Λέξεις ευρετηρίου: Ημικρανία, πρωτοπαθείς κεφαλαλγίες, κατάθλιψη, άγχος

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General article
Γενικό άρθρο

Psychosomatic medicine and Liaison Psychiatry: Empowering patients through imparting information

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The empowerment of patients is a key aspect of professionalism in psychiatry. The sensitive, accurate and timely imparting of information is one of the highest expectations that patients and carers have of health-care professionals. In the course of his clinical work in Liaison Psychiatry the author has developed an information leaflet which reflects established practice and emerging evidence in the broad field of psychosomatic medicine and mind body interactions and psychopathology. Informal feedback from patients, carers and fellow clinicians suggests that it has been well received. Good reception has been found in practice among patients often thought as resistant to psychological approaches to psychosomatics. Necessarily, a single patient information leaflet has limitations in its scope. The focus of the leaflet is primarily on setting the context for understanding processes of somatisation. This supports the establishment of a therapeutic alliance between patient and clinician. However, to make further progress in the care and management of patients presenting thus, excellent interview and communication skills on the part of the clinician are required.

Key words: Liaison Psychiatry, psychosomatic medicine, leaflet, therapeutic alliance

The empowerment of patients is a key aspect of professionalism in psychiatry.[1]

The sensitive, accurate and timely imparting of information is one of the highest expectations that patients and carers have of health-care professionals.[2] Examples of high quality information for patients and carers may be found on the frequently accessed website of the Royal College of Psychiatrists http://www.rcpsych.ac.uk/mentalhealthinfoforall.aspx Though the website includes pages on physical illness and mental health, a summary which presents an up to date integration of evolving evidence on mind body relationships and psychopathology is missing.

In the course of his clinical work in Liaison Psychiatry the author has developed an information leaflet which reflects established practice and emerging evidence[3–5] in the broad field of psychosomatic medicine and mind body interactions and psychopathology. Informal feedback from patients, carers and fellow clinicians suggests that it has been well received. Good reception has been found in

practice among patients often thought as resistant to psychological approaches to psychosomatics. This includes patients with somatoform disorders, even those with concurrent personality disorders. It is published here for wider use.

Necessarily, a single patient information leaflet has limitations in its scope. The focus of the leaflet is primarily on setting the context for understanding processes of somatisation. This supports the establishment of a therapeutic alliance between patient and clinician. However, to make further progress in the care and management of patients presenting thus, excellent interview and communication skills on the part of the clinician are required.[6]

Another shortcoming is that there is very limited information on specific somatoform disorders or functional somatic syndromes and no specific information on particular physical conditions (e.g Cardiovascular disease, Diabetes and others) and the relevance of psychological factors to these. Specific information on the latter for patients and the general public may be found in relevant websites, for example, in relation to coping with diabetes information may be found on *http://www.diabetes.org.uk/Guide-to-diabetes/Living_with_diabetes/Coping_with_diabetes/*

Though every effort has been made to ensure that the appended information is accurate, the specific information included requires regular review and updating in the light of changing evidence.

Appendix

Body and mind: A psychiatric perspective

Introduction:

Body and mind are two sides of the same coin.

Here we look at the relation between body and mind when people feel ill or fear they may be ill or are in pain or have other physical symptoms that bother them. We look specifically at how some psychiatrists and other doctors think about the relations between body and mind in such circumstances. Not all of this information will apply to you. The purpose of the information is to give you an opportunity to think about such issues and ask questions of your GP or your psychiatrist or other health professional.

If you have any questions of (insert name of clinician here) you may make an appointment to discuss them by ringing his secretary (insert name of secretary here) on (insert telephone number here).

Mind

We all know what the body is, even when we don't understand its details and ways of working. But, what is the mind? Mind here refers to one's thoughts, memories, emotions, attitudes, wishes, relations and so on. In order to have a mind we need to have a body. However mind extends beyond our body to our relationships with others and position in society and expectations and fears of the future.

Emotions and other mental factors cause changes in our body. For example, when we don't like someone we may say that he is a "pain in the neck" because this is what she/he makes us feel. Similarly, when we don't trust a person or a situation but don't know why, we say that we have a "gut feeling" that something is not right. It is not surprising therefore that mental disorder may cause or aggravate physical symptoms.

In this leaflet there is repeated reference to mental disorders. A lot of people, including some doctors and psychologists and other mental health professionals, avoid talking about mental disorders. This is because of fear of stigma and offending patients. The reason for referring to mental disorders here is not to frighten or stigmatize or offend patients but to identify problems and solutions that may help with these problems. In many cases these problems have been going on for a long time and doctors have been unable to help.

Where psychological factors are important but not identified, there are risks for patients. A particular risk is that they may be referred to multiple hospital departments, have multiple physical investigations. Some intrusive and risky investigations may cause more harm than good. This is called iatrogenic harm. In extreme cases, patients have had operations that they did not really need. In many of these cases the surgeons have been very cautious and reluctant about proceeding with the operation but the patient's insistence on physical treatment and neglect of psychological issues has put pressure on the surgeon and other doctors to intervene. Doctors may also be under pressure from patients to prescribe medication that there is reason to fear may turn out to cause iatrogenic harm.

Organic mental disorders

Diseases of the body may affect the mind. For example, some people suffer from over-activity of the thyroid gland, a gland positioned in the neck. When this gland is overactive, people not only experience physical symptoms such as loss of weight and palpitations of the heart, and even vomiting, but also overactivity and mental symptoms such as anxiety and, in very extreme cases, paranoia. In such cases patients may have a swelling in the neck and laboratory tests will show abnormal results in the measurements of thyroid hormones.

People may sometimes forget that the brain is just another part of the body but it is. Diseases of the brain can also cause mental problems.

A form of brain disease that causes mental symptoms, is increasingly common and is becoming increasingly well understood is Alzheimer's disease. This is a form of dementia and may cause mental symptoms such as memory impairment, loss of judgment, anxiety and depression and even hallucinations. Looking at brain specimens under the microscope scientists have identified specific changes in the brain, called amyloid plaques and neurofibrillary tangles, which are associated with this disease. Brain scanning often shows shrinkage of the brain.

Mental illness caused by diseases of the body and brain are often called "organic". In such cases we can see an abnormality in the body or brain, either with the naked eye or under the microscope or with special investigations such as blood tests or x-rays or scans.

When organic mental disorders, due to thyroid or brain or other disease, are present it is important to identify them because many of them (but not all) may improve dramatically with the right treatment. Even when we can not treat them fully we may be able to get help in managing as best as possible.

Functional mental disorders

Functional Mental Disorders are different to Organic Mental Disorder because often there is no specific abnormality to be seen with the naked eye or with special tests in the body or the brain. They are called functional psychiatric disorders because there is assumed to be a change in function of the brain and the various neurochemical systems associated with it, but not a change in structure. There is research to support such a view.

Common functional psychiatric disorders include affective disorders such as major depression and anxiety disorders such as generalized anxiety disorder, panic disorder and post traumatic stress disorder. Less common but more severe functional psychiatric disorders include affective disorders such as bi-polar disorder (manic depression) and schizophrenia. Other less common functional mental disorders include eating disorders such as anorexia nervosa.

Functional Mental Disorders can be the cause of physical symptoms for which doctors can not find a physical cause. Such symptoms may include pain in any part of the body, tiredness, dizziness, change in bowel habit etc.

Functional Mental Disorder can also cause worry that one is suffering from physical illness even in the absence of such illness. This is called "hypochondriasis".

Some patients do not worry about having a physical illness such as cancer, but instead worry excessively about their appearance. Both men and women may worry about the shape or size of the nose. Women may also worry about the shape or size of their breasts and men may worry about the shape or size of the genitals. People with anorexia nervosa may worry about their weight and being fat.

Both common and severe mental disorders may respond very well to treatment and this is why they need to be identified when present. Such treatment may be available in primary care or in hospital departments or in specialist mental health and psychological treatment services.

There is a lot of good information on functional mental disorders on the Royal College of Psychiatrists' website on: *http://www.rcpsych.ac.uk/mentalhealthinformation.aspx*

Functional somatic syndromes

Functional somatic syndromes are NOT the same as functional psychiatric disorders.

Functional somatic syndromes are groups of common symptoms that patients present with to general medical practitioners or to specialist hospital departments such as gastroenterology, gynaecology, rheumatology, cardiology, orthopaedics etc. Examples

of such syndromes/collections of symptoms include irritable bowel syndrome, chronic pelvic pain, fibromyalgia, atypical chest pain, chronic fatigue syndrome, hyperventilation syndrome, chronic back pain, tension headache and so-called multiple food sensitivity.

It is important to note that if a patient has one of these conditions they are also more likely, compared to the general population, to have one or more of the others! This is particularly so if the GP has referred them to specialists. So, for example, a patient who suffers from fibromyalgia or chronic fatigue syndrome may also be more at risk than the average person of suffering from irritable bowel syndrome or atypical chest pain.

There may be a physical basis to such syndromes. Doctors are not certain but it seems that there may be changes in the immune system of patients with fibromyalgia or chronic fatigue syndrome. There may also be a psychological basis for such symptoms. For example, we know that stress can aggravate all these conditions.

Although functional somatic syndromes are not the same as functional psychiatric disorders it is also important to note that people that suffer from these conditions are also more likely to suffer from functional psychiatric disorders such a depression and anxiety. Some patients with functional somatic syndromes may, therefore also have functional psychiatric disorders while others may not.

Sometimes patients find it hard to accept that there are important psychological factors. This may be because of fear of stigma and being labelled 'mad'. However, the reason for noting the importance of psychological factors is not to label people as 'mad' or otherwise. Indeed, it is relatively rare that severe mental illness is the cause of symptoms, though this may happen, and on such occasions it is important to identify and treat it well. The purpose of identifying the importance of stress and other psychological factors is to help patients.

A variety of treatments have been found to be helpful in functional somatic syndromes. To some extent these need to be tailored to the specific patient or condition. Treatments that have been found to be helpful have included appropriate diet, graded exercise and psychological treatments like Cognitive Behaviour Therapy (CBT) and Psychotherapy and more intensive short term rehabilitation programmes. Antidepressant medication may also help, even when patients are not depressed!

Somatoform disorders

A group of patients that are perhaps particularly at risk of iatrogenic harm, that is being harmed rather than helped by medical investigation and treatment, are those suffering from somatoform disorders.

The most severe end of these disorders is called somatisation disorder. This is characterised by a significant number of changing medical symptoms (including pain, neurological, heart/chest, gynaecological/reproductive/sexual etc.) leading to referrals to multiple hospital departments and repeated investigations. One of the paradoxes of these conditions is that although such patients are investigated extensively and no underlying medical condition can be found, which should be reassuring, patients remain worried and are not infrequently angry and dissatisfied about medical care.

Though patients with somatoform disorders are worried about their health, they do not usually fear a specific physical illness, so they are different from those suffering from hypochodnriasis.

Medically unexplained symptoms

In some cases it may be that the doctors have missed a physical illness that is present that they should have identified. An alternative is that the patient may have a physical illness that medical and clinical science has not identified or understood. A further alternative may be that the patient and doctor are faced with a range of two groups of overlapping clinical conditions that are known as functional somatic syndromes and somatoform disorders.

The role of personality

Sometimes functional psychiatric disorders, functional somatic syndromes, somatoform disorders or unexplained medical symptoms may occur in individuals who are vulnerable because of their personality characteristics. By personality, we mean ones habitual way of thinking, responding to stress, temperament and mood and relations with and attitudes towards others. Patients may be reluctant to bring up relevant issues because of the sensitivities involved.

Patients may suffer from personality disorders but doctors, being aware of their sensitivities, may be reluctant to ask relevant questions. However, it is becoming increasingly important to attempt to address such issues when appropriate, because psychiatrists and psychologists are developing effective ways of helping. Helping with personality issues may be essential in order to achieve long-lasting benefit for treatment of pain and other physical symptoms.

Stress

The word stress was imported into psychiatry from the science of construction materials. In science it refers particularly to circumstances where construction materials are stretched beyond their level of tolerance and they are, therefore, at risk of breaking. It is the same with humans; we all have our limits and there are risks if we are stretched beyond these.

Human stress can cause widespread changes in our nervous, hormonal and immune system particularly through a complex set of functions that connects these systems and is called the "hypothalamic-pituitary-adrenal" axis (HPA). Stress can affect this axis in different ways depending whether it is acute or chronic (long term), but in both cases it can cause both physical and mental problems.

The acute effects of stress may include palpitations of the heart, shortness of breath, increased pain, increased alertness, anxiety, worry, and even panic attacks. It can also cause changes in our body that take place but we are not aware of, such as increasing the readiness of our immune system to respond or suppressing the capacity of our reproductive organs and thus contribute to infertility.

The effects of long term stress may include hypertension, heart disease, obesity, diabetes, continuing infertility, impaired concentration and memory and clinical depression or relapse of psychosis.

Research shows that patients with functional psychiatric disorder, chronic pain, functional somatic syndromes, somatoform disorders and medically unexplained physical symptoms have high levels of stress.

Treatment: Ways forward

Can anything be done to help people that suffer from functional somatic syndromes or somatoform disorders?

Psychological treatments, for example, in the form of Cognitive Behavioural Therapy may help. Sometimes these need to be combined with physiotherapy and other physical approaches in a more intensive rehabilitation programme. Patients may have access to specifically designed rehabilitation programmes for chronic pain or fibromyalgia or chronic fatigue syndrome.

Patients with pain may derive benefit from seeing a pain specialist, or in the case of headache, a neurologist. Such doctors may prescribe painkillers. There is a wide variety of painkillers that may be used to good effect. Antidepressant medication has also been shown to help even patients that don't suffer from a functional psychiatric disorder such as an affective or anxiety disorder.

Often when taking medication for functional somatic syndromes and somatoform disorders, patients need to be realistic about expectations. Such treatments may reduce the severity and duration of symptoms and their impact on daily life without eliminating them completely. Small but significant improvements, rather than a complete cure, may be brought about. This is one reason for attending to mental/psychological issues as well. The other reason for attending to such factors is that medication can have side effects and when doctors are not informed of other relevant factors they may prescribe higher doses, sometimes very high doses of such medication, which may place the patient at increased risk. Paradoxically, in fact, painkillers themselves may also place patients at some risk of experiencing more rather than less pain, thus leading to a vicious circle.

Psychological factors are important in all body-mind problems. For example, research has shown repeatedly that it is not so much the severity of a physical illness that determines the unhappiness and coping of an individual as their pre-existing personality characteristics, a history of depression or anxiety and the quality of their family and other social support that they receive. People that have an inborn tendency to worry and "catastrophise", those that have suffered abuse or deprivation in childhood or may be in abusive relationships or other current traumatic circumstances may find it more difficult to cope with physical illness but are also more likely to develop functional psychiatric disorders, functional somatic symptoms or somatoform disorders. Through

counselling or specific psychological treatment such as Cognitive Behavioural Therapy or trauma focused therapy or psychodynamic psychotherapy, or mentalisation therapy it may be possible to help people use their strengths and cope better.

It is important to remember that all people have strengths. This is particularly the case for those people who have been through severe trauma or abuse and have shown remarkable resilience by soldiering on despite the impact of such experiences. It is often a matter of identifying and building on such strengths. Patients themselves sometimes may not be aware of their strengths.

Where there are problems of personality these may need treatment in their own right to ensure good results from other treatments.

Ψυχοσωματική και Διασυνδετική Ψυχιατρική: Ενίσχυση των ασθενών διαμέσου της μετάδοσης πληροφορίας

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Η ενίσχυση των ασθενών αποτελεί ένα από τα κλειδιά της επαγγελματικής στάσης στην ψυχιατρική. Η ακριβής, ευαίσθητη και έγκαιρη μετάδοση της πληροφόρησης αποτελεί μια από τις σημαντικότερες προσμονές των ασθενών και των φροντιστών τους. Ο συγγραφέας κατά την πορεία της κλινικής του εργασίας στη Διασυνδετική Ψυχιατρική συνέταξε πληροφοριακό φυλλάδιο που αντανακλά την καθιερωμένη πρακτική και την αναδυόμενη τεκμηρίωση στο ευρύ πεδίο της ψυχοσωματικής ιατρικής, της αλληλοδράσης του σώματος και του νου και της ψυχοπαθολογίας. Η άτυπη ανατροφοδότηση από τους ασθενείς, τους φροντιστές και τους συναδέλφους έδειξε ότι έχει καλή πρόσληψη από ασθενείς θεωρούμενους μη δεκτικούς σε ψυχολογικές και ψυχοσωματικές προσεγγίσεις. Εδώ δημοσιεύεται το φυλλάδιο με σκοπό την ευρύτερη χρήση του. Αναγκαστικά το φυλλάδιο έχει περιορισμούς στους στόχους του και περιορισμένες πληροφορίες για συγκεκριμένες σωματόμορφες διαταραχές και λειτουργικά σωματικά σύνδρομα, ενισχύει όμως τη θεραπευτική συμμαχία ανάμεσα στον ασθενή και τον κλινικό. Οι πληροφορίες στο παράρτημα χρήζουν τακτικής ανασκόπησης και ενημέρωσης.

Λέξεις ευρετηρίου: Διασυνδετική Ψυχιατρική, ψυχοσωματική ιατρική, ενημερωτικό φυλλάδιο, θεραπευτική συμμαχία

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General article
Γενικό άρθρο

Julius Wagner-Jauregg (1857–1940): Introducing fever therapy in the treatment of neurosyphilis

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For centuries, heat has been used in various ways for the cure of mental diseases. Hippocrates noted that malarial fever could have a calming effect in epileptics. Centuries later, Galen described a case of melancholy cured as a result of an attack of quartan fever. In 19th century, the eminent French psychiatrist Philippe Pinel, in his treatise on insanity referred to the beneficial effect of fever. An opinion expressed few years later by his pupil Jean-Étienne Dominique Esquirol in his treatise entitled *Des maladies mentales considérées sous les rapports médical, hygiénique et médico-légal*. However, in 1917, the Austrian neuro-psychiatrist Julius Wagner Jauregg pointed out the therapeutic value of malaria inoculation in the treatment of dementia paralytica. In 1927, Wagner Jauregg received for this work the Nobel Prize in Medicine, being actually the first psychiatrist to win the Nobel Prize. He studied medicine at the University of Vienna and received his doctorate in 1880. In 1889, he was appointed Professor of Psychiatry and Director of the Graz's Psychiatric Clinic, a position that he held until 1928. Working in the asylum, Wagner Jauregg noted that insane patients with general paralysis occasionally became sane after some febrile episode. After experimenting with several artificial methods (*streptococci*, tuberculin) to induce fever, he concluded that malaria was the most satisfactory. Actually, malaria infection was an acceptable risk for the patients, as quinine would be administered as soon as syphilis was cured. In 1917, he reported the first favorable results of his study. Patients were inoculated via intravenous injections with malaria. Some physicians were starting the administration of anti-syphilitic treatment (bismuth, salvarsan and later penicillin) after 10–12 febrile paroxysms, while others initiated the regimen the first febrile-free day after 8 malarial paroxysms. The therapeutic regimen was completed with the administration of quinine sulfate to terminate the malaria infection. It is worth mention-

ing that the above treatment was followed in hospital under strict monitoring of patients' vital signs and regular laboratory tests. In the following years of his discovery, artificial fever was induced by any one of the following methods: the introduction into the patient of a parasitic disease; the injection of a foreign protein; injections of chemical substances such as sulphur; electrical means such as the administration of diathermy or radiotherapy, or placing the patient in an electromagnetic field; and simple immersion of the individual in a hot bath, or placing him in a heat cabinet. Wagner Jauregg's therapy was highly admired and was used on neurosyphilis cases well onto the 1950's. However, with the introduction of penicillin in syphilis' treatment, fever therapy effectively ended. Wagner Jauregg's study led to all the methods of stress therapy used in psychiatry, as electric shock, and insulin.

Key words: Julius Wagner Jauregg, neurosyphilis, fever therapy, malaria

Introduction

For centuries, heat has been used in various ways for the cure of mental diseases.

Hippocrates (460–377 BC) noted that malarial fever could have a calming effect in epileptics "febrem convulsioni supervenire melius est, quam convulsionem febri", in other words "fever resolves spasm".[1] Centuries later, Galen (130–c. 201) described a case of melancholy cured as a result of an attack of quartan fever.[2]

In 19th century, the eminent French psychiatrist Philippe Pinel (1745–1826) in his treatise on insanity entitled *Traité médico-philosophique sur l'aliénation mentale*, referred to malarial fever as a disorder operating to produce a "permanency of recovery".[3] An idea that was also mentioned in Jean-Étienne Dominique Esquirol's (1772–1840), Pinel's pupil, book on mental diseases.[4]

In his turn, Dr Selode of Brussels, in his article published on January 16, 1845, cited that the appearance of an intermittent fever in an epileptic had sometimes the effect of modifying the convulsion affection. He mentions two cases in which fever put end to the epileptic attacks.[5]

In 1917, the Austrian neuro-psychiatrist Julius Wagner Jauregg pointed out the therapeutic value of malaria inoculation in the treatment of dementia paralytica.

For this innovation he was awarded, in 1927, with the Nobel Prize in Medicine, being actually the first psychiatrist to win the Nobel Prize.

Julius Wagner Jauregg: Treating neurosyphilis with malaria

Julius Wagner Ritter von Jauregg was born in Wels, Austria, on March 7, 1857. His father, a career bureaucrat, preferred him to choose philosophy but Julius decided to study medicine and obtained his medical degree at the University of Vienna on 1880.[6]

As a student, he worked at the Institute of General and Experimental Pathology, where in 1881 he became an assistant to its head, Professor Solomon Stricker (1834–1898).

From experimental pathology Wagner-Jauregg turned to internal medicine, hoping to be appointed to an assistantship at the Vienna General Hospital. However, his hopes were not realized and he accepted the offer of an assistantship at the First Psychiatric Clinic and at the Asylum of Lower Austria, whose Director was Max Leidesdorf (1816–1889).[7]

Von Jauregg was a member of the psychiatric staff at the University from 1883 to 1889 and Professor of Psychiatry and later Director of the Hospital at the University of Graz from 1889 to 1928[8].

In the asylum, he noted that insane patients with general paralysis occasionally became sane after some febrile episode.

Actually at the beginning of the 20th century, syphilitic patients comprised as much as 20% of the asylums population.[9] Despite the advances in the treatment of syphilis made during that period and the introduction of bismuth (Trepol) and arsenobenzol (Salvarsan) in therapeutics, the treatment of general paresis remained uncertain. So,

the prospect of slowing or arresting the progression of the infection was encouraging.

After experimenting with several artificial methods (streptococcus, tuberculin) to induce fever, von Jauregg concluded that malaria was the most satisfactory.[10] Actually, malaria infection was an acceptable risk for the patients, as quinine would be administered as soon as syphilis was cured.

In 1917, von Jauregg reported the first results of his study: among 9 treated patients, 6 responded favorably.[11]

It was said that the beneficial effects of artificial-fever therapy may result either from injury or destruction of the infecting parasite, or from increased resistance of the host against the parasite.[10]

Von Jauregg's therapy was highly admired and was used on neurosyphilis cases well onto the 1950's.

In the following years of his discovery, artificial fever was induced by any one of the following methods: the introduction into the patient of a parasitic disease which is usually accompanied by fever, such as malaria; the injection of a foreign protein; injections of chemical substances such as sulphur; electrical means such as the administration of diathermy or radiotherapy, or placing the patient in an electromagnetic field; and simple immersion of the individual in a hot bath, placing him in a heat cabinet, or wrapping him. However Laveran's plasmodium infection was of choice.[10]

Patients were inoculated via intravenous injections with malaria. After an incubation period of about a week, the patients would experience chills and nausea, followed by ranging fever of more than 41 Celsius degrees that lasted several hours. Over the next several days fever would alternate with chills.[9]

Some physicians were starting the administration of anti-syphilitic treatment (bismuth and salvarsan) after 10–12 febrile paroxysms, while others initiated the regimen the first febrile-free day after 8 malarial paroxysms. The therapeutic regimen was completed with the administration of quinine sulfate to terminate the malaria infection. It is noteworthy that this was strictly an in-hospital therapy under vital signs monitoring and regular laboratory evaluation.[10]

Fever therapy showed variable results. The distinguished German psychiatrist Oswald Bumke (1877–1950) applied artificial fever with malaria in 247 males and 60 females with neurosyphilis: "Out of the total, syphilis was acceptably recessed in 33.00% of the patients, while the recession was not acceptable in 14.25%. Repetition of the treatment resulted in acceptable recession in 23.48% of males and 28.33% of females. Mild recessions were observed in 22.26% of males and 23.33% of females. Stable condition was observed in 27.13% of males and 23.33% of females. Morbidity, during or within two months after treatment, was 27.13% for males and 25.00% for females".[12]

In 1943, John Mahoney (1889–1957), of the US Public Health Service, discovered that the spirochete bacterium Treponema pallidum, the causal agent of syphilis, was susceptible to penicillin.[13] The next years, till the prevalence of penicillin as a monotherapy, a transitional period occurred and the physicians were using for the treatment of neurosyphilis all the available methods (mercury, bismuth, salvarsan, penicillin and fever therapy).

It worth's mentioning that even in Greece, combined fever-therapy had been conducted with relatively positive results. In 1954, in Eginition Hospital, the Psychiatry and Neurology Department of the National and Kapodistrian University of Athens carried a study regarding fever-therapy in patients with neurosyphilis.

Professor George Pampoukis (1885–1959) and his collaborators published the results from 92 patients with syphilis induced paralysis who were treated with fever-therapy and anti-syphilis medication.

Patients were divided in two groups. In the first group (A), fever-therapy was combined with a triple antisyphilitic regimen (mercury, bismuth, salvarsan) while in the second group (B) penicillin was added in the regimen. The results were the following:

Group A

Therapy had positive effect in 43.5% of the patients (17.3% showed complete recession of the psychopathologic symptoms; 15.2% significant recession; and 11.0% mild recession).

Condition was stable in 35.0%, while in 21.5% of the patients the outcome was negative (6.5% deterioration; 15.0% death).

Group B (with the addition of penicillin)

Therapy had positive effect in 55.0% of the patients (22.0% showed complete recession of the psychopathologic symptoms; 11.0% significant recession). Condition was stable in 28% of the patients, while negative prognosis was observed in 17% of the patients. Finally, it is of interest that no deaths were recorded in this group.

However, in the following years, fever cure effectively ended as penicillin became the treatment of choice.[14]

Conclusion

Julius Wagner-Jauregg's battle with neurosyphilis brought about one of the most stimulating discoveries in modern medicine. His study led to all the methods of stress therapy, as electric shock, and insulin which were used in psychiatry.

Nowadays, interest in fever therapy still arises occasionally. In 2007, Curran LK et al reported that behavior of autistic children improve during episodes of fever. However all improvements were transient.[15]

Julius Wagner-Jauregg (1857–1940): Η εισαγωγή της πυρετοθεραπείας στη θεραπεία της νευροσύφιλης

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Η ιδέα της αύξησης της θερμοκρασίας του σώματος για τη θεραπεία των ψυχιατρικών και νευρολογικών νόσων ανάγεται στην αρχαιότητα. Ο Ιπποκράτης (460–377 π.Χ.) αναφέρει τη θετική επίδραση του εμπύρετου στην επιληψία. Αιώνες αργότερα, ο Γαληνός (130–π.201) περιγράφει ένα περιστατικό μελαγχολίας που θεραπεύτηκε μετά από επεισόδιο τεταρταίου πυρετού. Τον 19ο αιώνα, ο διακεκριμένος Γάλλος ψυχίατρος Philippe Pinel (1745–1826) στην πραγματεία του περί παραφροσύνης ή μανίας, θεωρεί πως το εμπύρετο της ελονοσίας έχει ευεργετική επίδραση στη θεραπεία των ψυχικών νοσημάτων. Άποψη που διατύπωσε λίγα χρόνια αργότερα και ο μαθητής του, Jean-Étienne Dominique Esquirol (1772–1840) στο σύγγραμμά του *Des maladies mentales considérées sous les rapports médical*, *hygiénique et médico-légal*. Ωστόσο, εκείνος που χρησιμοποίησε το εμπύρετο της ελονοσίας στη θεραπεία της νευροσύφιλης ήταν ο Αυστριακός ψυχίατρος Julius Wagner Jauregg (1857–1940), που το 1927 έλαβε το βραβείο Νόμπελ Ιατρικής για αυτήν του την ανακάλυψη. Ο Wagner Jauregg σπούδασε ιατρική στο Πανεπιστήμιο της Βιέννης απ' όπου πήρε το διδακτορικό του δίπλωμα το 1880. Το 1889 εξελέγη καθηγητής ψυχιατρικής και διευθυντής της Ψυχιατρικής κλινικής του Graz, θέση που διατήρησε μέχρι το 1928. Στο ψυχιατρικό άσυλο παρατήρησε πως οι ασθενείς με προϊούσα γενική παράλυση παρουσίαζαν βελτίωση μετά από κάποιο πυρετικό επεισόδιο και έτσι αποφάσισε να στρέψει την έρευνά του στην πυρετοθεραπεία. Αρχικά πειραματίστηκε με διάφορες πυρετογόνες ουσίες όπως το ερυσίπελας και η φυματίνη χωρίς ωστόσο ενθαρρυντικά αποτελέσματα. Το 1917, ενοφθάλμισε ελονοσία σε 9 ασθενείς που έπασχαν από προϊούσα γενική παράλυση και παρατήρησε πως οι 6 παρουσίασαν σαφή βελτίωση της κλινικής τους εικόνας. Άλλωστε το να νοσήσει ένας συφιλιδικός με ελονο-

σία αποτελούσε ελεγχόμενο ρίσκο μιας και μετά το πέρας της θεραπείας ο ασθενής θα λάμβανε αγωγή με κινίνη. Η μέθοδός αυτή έχαιρε ιδιαίτερης εκτίμησης και χρησιμοποιήθηκε ευρέως στη θεραπευτική της νευροσύφιλης έως τη δεκαετία του 1950. Η αγωγή ξεκινούσε με την πρόκληση εμπύρετου και συνεχιζόταν με τη χορήγηση συνδυασμένης αντισυφιλιδικής θεραπείας (βισμούθιο και αρσενοβενζόλη, αργότερα προστέθηκε και η πενικιλίνη). Ως προς την πρόκληση του εμπύρετου, προτιμότερη ήταν η διά του πλασμώδιου του Laveran μόλυνση ενώ εναλλακτικά χρησιμοποιούνταν άλλα τεχνητά μέσα όπως το αντιτυφικό εμβόλιο, πρωτεϊνικά διαλύματα, θειούχα σκευάσματα αλλά και ειδικοί θερμαινόμενοι θάλαμοι. Κάποιοι ιατροί προτιμούσαν 10–12 εξάρσεις πυρετού πριν την έναρξη της αγωγής ενώ άλλοι αρκούνταν σε 8 πυρετικές εξάρσεις και έναρξη της αντισυφιλιδικής θεραπείας την ημέρα της απυρεξίας. Αξίζει να σημειωθεί πως η παραπάνω θεραπεία ακολουθείτο πάντα σε νοσοκομείο, όπου παρακολουθούνταν τα ζωτικά σημεία του ασθενούς και γίνονταν τακτικός εργαστηριακός έλεγχος. Τα αποτελέσματα της αγωγής ήταν ποικίλα ενώ η προσθήκη της πενικιλίνης συνοδεύτηκε με υψηλά ποσοστά βελτίωσης και ίασης, καταδεικνύοντας την τρεπονημοκτόνο δράση της. Από τα μέσα της δεκαετίας του 1950 η πυρετοθεραπεία σταδιακά εγκαταλείφθηκε.

Λέξεις ευρετηρίου: Julius Wagner Jauregg, νευροσύφιλη, πυρετοθεραπεία, ελονοσία

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General article
Γενικό άρθρο

Reflexions on the identity and the practice of child Psychiatry

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The issue of the professional identity is salient for any medical discipline but especially for these, like child psychiatry and perhaps psychiatry, where the professional is the principal “instrument” in the assessment and in providing interventions. The Ericksonian view on identity implies self-sameness, continuity and synthesis which the child psychiatry as a specialty and child psychiatrists as professionals are to achieve more or less successfully. As a professional, the child psychiatrist is directed to the prevention, diagnosis and treatment of psychiatric disorders and associated problems in children and adolescents viewing children as developing biopsychological entities being in ongoing co-influencing interaction with their immediate and wider societal contexts. As a discipline, child and adolescent psychiatry needs to integrate developmental biological and psychological aspects, and holistic child-centered and family-focused perspectives. Child psychiatry is to integrate not only various aspects of the child as individual and of his environments as they are, but also in their diachronic dimension. As child psychiatrists, in my view, we must keep integrated in our professional armamentarium the consideration for intra- and interpersonal processes. In that perspective, of special value is the appreciation of setting, of timing, and of interpersonal processes in their interaction with intrapersonal ones. In addition, being both child-centered and family-focused, we need a systemic literacy to look at the families and of children as part of them. Apart from evidence-based information and clinical skills, we need some mature attitude to helpfully use our knowledge and skills. This attitude can transcend the state of the art professional algorithms; rather it integrates and not just imitates them. It cautions against too much enthusiasm in following the pendulum. It implies awareness of some reasonable limit to the urge to change the children and families. In fact, many developmentally and behaviorally disabled children need not only attempts to correction, but also some help to live and develop more successfully with their handicaps. Here, if not everywhere, a facilitating discovery and building on patient’s personal assets professional approach is needed. The international integration of “child psychiatries” of different countries and world’s regions is valuable, and not only with reference to elaborating on and further developing child psychiatry as a theory and practice, but in the view of international co-support, which being almost everywhere under-served child psychiatry and its potential patients-children, adolescents and families-necessitate.

Key words: Child psychiatry, child psychiatrist, professional identity, integration, continuity

Being with the profession of child psychiatry since 1985, the problem of reconsidering the issue of the professional identity of child psychiatrist and of child psychiatry as well as the different ways to be a child psychiatrist is, as I feel, timely for me. I also believe that topic to be important for any helping profession like child psychiatry.

I strongly believe that we need routinely to look at and reflect of ourselves despite the heavy stone of everyday preoccupations and duties, to be like

Theseus who succeeded to lift a stone to find the token placed under it including his father's name.[1]

For years, I have led multi-disciplinary teams in child psychiatry and have been routinely engaged in teaching to and discussing with medical students, residents in psychiatry and child psychiatry, and students in psychology. All these experiences have recurrently raised the question of what the distinctive features of our discipline are and could be.

Undoubtedly, the professional identity (or identities) of child psychiatrists is reflected in what and how they do or abstain to do in their practice, what they say and write about it, and how are they influencing the public perception of them. Being an active participant in the professional field in Bulgaria, I saw the extent to which the practice and ideas can change not only as following the unavoidable pendulum, but as influenced by the leaders in the field and the politico-societal contexts. So, the future of our discipline also depends on our attitude and conscious efforts in that direction. While working with patients, we are also agents in the society, and are responsible for the image of the profession, its definition, its real and perceived utility, and its future development.

In my view, a (possible) definition of the child psychiatrist as a professional can be stated as a "medical doctor directed to the prevention, diagnosis and treatment of psychiatric disorders and associated problems in children and adolescents as developing biopsychological entities in ongoing interaction with their immediate and wider societal contexts". Here, I mean the child as developing individual with a given genetically potential, being brought into existence and consequently shaped by the environment while at the same time influencing it; and psychiatric symptoms, signs and disorders, of course their precursors, taken in clinical and developmental perspectives. The developmental focus of Child Psychiatry, indeed, may be distinctive feature,[2] a hallmark of our discipline.

Here, I may add the major for me characteristic of our discipline – its integrative aspect. In my belief, it can precise the specialty of child psychiatry as an independent one. At least, child and adolescent psychiatry integrates developmental biological and psychological aspects, and holistic child-centered and family-focused perspectives. The former distinguishes it from the general psychiatry and the later from the pediatrics or child neurology. Thus, like unicorn, "a fabulous animal that combines many attributes in a single creature" the child psychiatry "has its qualities as well as virtues and one is obliged to report both".[3]

Undoubtedly, our discipline is to integrate not only various aspects of the child as individual and of his environments as they are, but also the past and the present – as they apply to our patients, generations of patients and to us as a succession of individuals and an evolving discipline. Historical as well as developmental process is not a linearly and uniformly positive one. There are assets in danger to be left in the past. The child psychiatrists of the beginning of the 21st century are to seek to combine "the best of both worlds, the old and the new".[4] As witnesses and agents in different times of the ever evolving profession, the senior professionals may transmit the need for necessary historical synthesis and embody it.

Wherever as a specialty and profession we go and whatever the contexts we live in impose on us, I believe, we must continue to try to keep integrated in our professional equipment the consideration for intra- and interpersonal processes. For me, when working with children and families, of special value is the appreciation of setting, of timing, and of interpersonal processes in their interaction with intrapersonal ones, and in their diachronic and synchronic aspects. Furthermore, in the days of the expansion of neurobiological and basic research and of collecting evidence-based facts about disorders and interventions (i.e. information) we may overlook that all we do with patients is relationally mediated (i.e. process). Apart from information and discrete clinical skills, we must have some personal maturity and thus capacity to helpfully use our knowledge and interventive requisite. Also, being family-focused, we need a "systemic eye" to look at the families. The importance of family assessment is exemplified by the existence of a separate AACAP's Practice Parameter.[5] Considering the child as belonging to family subsystem(s) and being more or less at his right place in a given family at a given time, or as sometimes subjected to aberrant familial processes like triangulation or parentification, or perceiving the family as more or less flexible in adapting to constitutionally "difficult child," turbulent developmental transitions, or stressful events, are all matters of importance.

With respect to relationship's quality and unfolding, we must be constantly aware that the act of medication, a prominent part of our therapeutic armamentarium today, is also in the matrix of relationships. As Sprenger and Josephson state "medication noncompliance typically suggests family issues".[6]

Perhaps health insurance systems and case loads will keep to impel us to act rapidly and superficially in a work, where out of emergent cases or even in them after the emergent phase, we need a time for unfolding of the relationships with the child and the family to appreciate the right time, kind and focus of intervention(s). Often, in integrating interventions we need to sequence them and intervention sequencing needs time. Apart from managed care exigencies, the "western attitude" to act and induce changes, and some "voyeuristic" pressures of the mass culture today may leave out underdeveloped the attitude to look at inside, at ourselves as participants, influencing the interpersonal processes and their outcomes. In my view, this attitude towards consideration of our own input into relational domain and relational outcomes has to be transmitted to trainees, as something valuable to their work with patients.

When immersed into a given topic or trend, or a thematic content, we are running the risk to overvalue and extend it. Knowing the brain as an organ to the extent that the current knowledge permits us, for example, is necessary but not sufficient. On slightly enlarged ground, the information only is not sufficient. At least, we need a tridimensional professional armamentarium – attitude (more or less aware, we always have it), information and skills. In addition, each of these is acquired predominantly by different processes. Clinical skills, for example, as Jellinek[7] points out, are learned by "apprenticeship requiring time, experience and supervision." Viewing the individual professional formation in Eriksonian[8] terms at the beginning there is preponderance of identification (in selecting information and building practical skills), perhaps mainly with trainer(s) but also collateral, lately comes the personalization of what is acquired and thus a more stable individual professional identity begins to emerge.

Too much ardor to apply the state of the art knowledge or fashionable professional thinking and algorithms, or too much enthusiasm to follow the pendulum at its extremes, may be (dangerously) misleading. The "wild" application of psychoanalysis in cases of childhood autism with "all blame to mothers" consequences is one of the striking historical lessons. Another one are the histories of psychological treatment of individuals with Tourette's syndrome long practiced before recognizing it as a neurobehavioral disorder. Nowadays, one of the dangers may be applying medication more (as indications, dosing, combination) and earlier than justified, as a sole interventive modality, or at the expense of other interventions.

Some reasonable limit to the urge to define, to prove and to change, may be justified. Perhaps, it is helpful to remember that another, more eastern philosophic approach to the world exists, where accepting the truth as given and trying to find a balance is sometimes needed. In fact, many children (and their families) with some disorders (such as Tourette's and ADHD) need not only medication, but also help to can live, function and develop more successfully with their more or less medication-controlled handicaps. Not only correctional, but facilitating discovery and building on patient's personal assets professional approach is needed.

The international integration is valuable for the profession and its cross national identity but it remains somewhat more difficult for poorer countries like mine. Here we need to create more opportunities for sharing with each other and for exposing and critically discussing the implication of biological and psychosocial aspects of child mental health and illness, individual and relational focus, research and clinical wisdom, quantitative and qualitative approaches to assessing and describing reality, and integrating the present and the past beyond the current conjuncture of professional fashion. In my view and regrettably, the leading journals in child psychiatry, like "the Orange Journal" of AACAP, are currently publishing almost entirely quantitative research articles omitting some topics and type of articles they previously had been publishing.

This international integration and co-support are especially valuable for a discipline like child psychiatry. For various reasons, including economical ones, it continues to be not so attractive for the majority of the graduating medical students, remaining one of the least chosen. It can hardly compete with the major medical specialties for funding and for public attention. More the national health system in market-oriented, less chances child psychiatry has to survive and develop successfully. There is, though disproportionate, a shortcoming of child psychiatrists almost everywhere in the world and as a consequence the mental health needs of many children remain underserved. Because our specialty needs to be an object of special governmental interest and a State child mental health policy, the potential role for achieving this goal of the international organizations like IACAPAP and ESCAP is considerate.

Προβληματισμοί για την ταυτότητα και την πρακτική της Παιδοψυχιατρικής

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Το ζήτημα της επαγγελματικής ταυτότητας είναι ουσιαστικό για οποιαδήποτε ιατρική ειδικότητα, αλλά κυρίως για ειδικότητες, όπως η Παιδοψυχιατρική και η Ψυχιατρική, όπου ο επαγγελματίας είναι το βασικό «εργαλείο» για την αξιολόγηση και την παροχή παρεμβάσεων. Η άποψη του Erickson σχετικά με την ταυτότητα συνεπάγεται αυτο-ομοιότητα, συνέχεια και σύνθεση, πράγμα που η Παιδοψυχιατρική ως ειδικότητα και οι παιδοψυχίατροι ως επαγγελματίες επιχειρούν να επιτύχουν, με άλλοτε μεγαλύτερη και άλλοτε μικρότερη επιτυχία. Ως επαγγελματίας, ο παιδοψυχίατρος ασχολείται με την πρόληψη, τη διάγνωση και τη θεραπεία των ψυχιατρικών διαταραχών και των συναφών προβλημάτων σε παιδιά και εφήβους τους οποίους αντιμετωπίζει ως βιοψυχοκοινωνικά αναπτυσσόμενες οντότητες που βρίσκονται σε συνεχή αλληλεπίδραση με το άμεσο και το ευρύτερο κοινωνικό τους πλαίσιο. Η Ψυχιατρική παιδιών και έφηβων καλείται να ενσωματώσει βιολογικές και ψυχολογικές αναπτυξιακά πτυχές, και να υιοθετήσει μια ολιστική παιδοκεντρική και οικογενειο-κεντρική προσέγγιση. Επιπλέον, η Παιδοψυχιατρική καλείται να λάβει υπ' όψιν της όχι μόνο τις διάφορες πτυχές του παιδιού ως ατόμου και του περιβάλλοντός του, αλλά και τη διαχρονική-εξελικτική τους διάσταση. Ως παιδοψυχίατροι, οφείλουμε να ενσωματώσουμε στην επαγγελματική φαρέτρα μας τη συνεκτίμηση τόσο εσωτερικών όσο και διαπροσωπικών διεργασιών. Στο πλαίσιο αυτό, ιδιαίτερη αξία έχει η εκτίμηση του πλαισίου, του χρόνου, και των διαπροσωπικών διεργασιών σε αλληλεπίδραση με τους εσωτερικούς. Επιπλέον, έχοντας παιδοκεντρική και οικογενειο-κεντρική προσέγγιση, χρειαζόμαστε μια συστηματική πρακτική για να εξετάζουμε τις οικογένειες και τα παιδιά ως μέρος αυτών. Εκτός από βασισμένες σε αποδείξεις πληροφορίες και κλινικές δεξιότητες, χρειαζόμαστε κάποια ώριμη στάση, ώστε πρόθυμα να χρησιμοποιούμε τις γνώσεις και τις δεξιότητές μας. Αυτή η στάση μπορεί να ξεπεράσει τους τέλειους επαγγελματικούς αλγόριθμους, ενσωματώνοντάς τους στην κλινική πράξη. Συνεπάγεται επίσης την οριοθέτηση μιας λογικής στην παρόρμηση που μπορεί να υπάρχει για να αλλάξουμε τα παιδιά και τις οικογένειες. Στην πραγματικότητα, πολλά παιδιά με αναπτυξιακά και συμπεριφορικά προβλήματα έχουν ανάγκη όχι τόσο προσπαθειών για βελτίωση, αλλά κάποια βοήθεια για να ζήσουν και να αναπτυχθούν παρά την αναπηρία τους. Η ενσωμάτωση του τρόπου με τον οποίο ασκείται η Παιδοψυχιατρική σε διαφορές χώρες είναι πολύτιμη, και όχι μόνο για την περαιτέρω ανάπτυξη της Παιδοψυχιατρικής ως θεωρία και πράξη, αλλά για την εξυπηρέτηση της διεθνούς συνεργασίας και στήριξης η οποία στον χώρο μας βρίσκεται σε εμβρυϊκό επίπεδο.

Λέξεις ευρετηρίου: Παιδοψυχιατρική, παιδοψυχίατρος, επαγγελματική ταυτότητα, ολοκλήρωση, συνέχεια

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Case report
Ενδιαφέρουσα περίπτωση

Psychotic symptoms in normal pressure hydrocephalus

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Normal Pressure Hydrocephalus due to idiopathic aqueductal stenosis is a chronic abnormal accumulation of cerebrospinal fluid in the cerebral ventricles caused by an obstruction in the Sylvian aqueduct. This leads to a dilatation of the ventricular system and to subsequent damage of the adjacent parenchyma. Although NPH typically presents with the progressive 'triad' of cognitive impairment, gait disturbance and urinary incontinence, it has been described that it rarely manifests in the form of predominant psychotic symptoms. It has been suggested that thought and perceptual disorders could develop secondary to the damage caused by NPH. Although precise anatomical correlates have not yet been established, certain cerebral regions –primarily the frontal cortex, mesencephalic and diencephalic structures of the brain– have been implicated in the pathogenesis of hydrocephalic psychosis. Because frontal lobe lesions are traditionally known to facilitate one's inability to integrate and correct perceptual distortions in the face of contradictory evidence, frontal lobe dysfunction may be integral in delineating the etiology of delusions in NPH. We present the case of a 30-year-old female, admitted involuntarily to our acute psychiatric department because she exhibited aggressive behavior while being in an agitated state with delusions of persecution. Her neurological examination disclosed subtle bradykinesia. Neuropsychological batteries and intelligence testing revealed mild cognitive impairment and a CT scan showed considerable dilatation of the ventricular system due to idiopathic aqueductal stenosis. While a conservative approach was chosen for the treatment of NPH, our patient was initiated on 2nd generation antipsychotics showing marked improvement of her psychiatric symptomatology. The atypical presentation of hydrocephalus in the aforementioned case underlines the necessity to thoroughly investigate the possible presence of an underlying organic factor in those patients who present with predominant psychotic symptoms in association with soft non-localising neurological signs and mild cognitive deficits. Furthermore, our patient's marked improvement indicates that, in cases where the primary cause is treated conservatively, hydrocephalic psychosis could respond to 2nd generation antipsychotics. In light of this case report, we reviewed past and present literature on the matter.

Key words: Normal pressure hydrocephalus, psychotic symptoms, mild cognitive impairment, frontal lobe dysfunction, atypical antipsychotics, paliperidone

Introduction

Normal pressure hydrocephalus (NPH) due to idiopathic aqueductal stenosis is a chronic abnormal accumulation of cerebrospinal fluid (CSF) in the cerebral ventricles caused by an obstruction in the Sylvian aqueduct. This leads to a dilatation of the ventricular system and to subsequent damage of the adjacent parenchyma. Although NPH typically presents with the progressive "triad" of cognitive impairment, gait disturbance and urinary incontinence, it has been described that it rarely manifests in the form of predominant psychotic symptoms.

Case report

Chief complaint

Ms. A, a 30-year-old, divorced, unemployed, white woman with some high-school education was referred to and admitted involuntarily in our acute psychiatric department because she exhibited verbal and physical aggressive behavior towards members of her immediate family while being in an agitated state with delusions of persecution.

History of present illness

Ms. A's symptoms were first observed by her family approximately five years before her current presentation. Following a period of severe marital and financial difficulties, she became melancholic, irritable and intolerant of social interaction, withdrawn and isolated, negligent of her personal hygiene and constantly involved in delusional ideas of persecutory type.

Ms. A unquestionably attributed all her misfortunes to the devious and malevolent acts of certain, living or dead, members of her family. Although the patient was unspecific about the means used by these persons to carry out their plan, it was implied that some kind of magical procedure, like casting of spells or curses, was implemented.

During the aforementioned 5 year period, she remained housebound and showed absolute decline in her social, interpersonal and occupational level of functioning. As the patient was unable of attending to basic daily activities, such as food preparation, house cleaning, washing and bathing, she developed a total dependency upon her mother in whose house she also resided. It should also be noted that during the same 5 year period she exhibited increased appetite and considerable weight gain.

Ms. A had a history of mediocre academic performance deciding on her own will to quit high school when she was 15 years old. This decision was greatly influenced by the relocation of her family from a heavily populated modern urban area to a thinly populated conservative rural area where the patient never managed to appropriately adjust. In the following years, subsequently to her father's financial ruin, the patient experienced another traumatic event; this being her somewhat obligatory immigration to Germany in search of employment. This choice was dictated by the presence of close relatives in Germany, especially her maternal grandmother, who could act as a strong support system for her.

While in Germany, she was married to a 2nd generation greek immigrant of significant financial status. However, after a couple of years, certain stressful events, such as the loss of her maternal grandmother and the severe financial and health problems of her husband, put a terrible strain both on her mental health and on their marriage which soon after dissolved.

Immediately after the dissolution of her marriage, Ms. A –already exhibiting the above mentioned signs of serious mental illness and apparently unable of taking care of herself– returned to the safety and support of her parents.

Lacking insight into her mental illness, the patient explicitly rejected her family's persistent suggestions to seek psychiatric help, thus remaining undiagnosed and untreated for several years.

The exacerbation noted in her mental status at the time of referral seemed to have a temporal correlation and might have been triggered by the recent loss of her father who had died of a heart attack 40 days prior to admission.

Diagnostic evaluation

Ms. A's psychiatric examination on admission revealed the following clinical features:

- A guarded and reserved attitude towards the examiner
- Affective flattening with affective non-responsivity, unchanging facial expressions, decreased sponta-

neous movements, paucity of expressive gestures, lack of vocal inflections and poor eye contact
- Poor grooming and hygiene
- Poverty of content of speech
- Persecutory delusions.

Due to her obese physical appearance which raised the question of an underlying endocrine disorder (e.g. Cushing's syndrome, hypothyroidism), along with the fact that this was her first hospitalization, we submitted the patient to an extensive medical work-up.

The following screening tests were performed and proved within normal limits:
- Complete blood count
- Complete blood chemistries (including glucose, electrolytes, B12, folate, tests of hepatic and renal function)
- Thyroid function tests
- Hepatitis markers (HBV, HCV)
- HIV markers and RPR test
- Serum cortisol
- Plasma ACTH
- Pituitary hormone tests
- EKG.

Ms. A's slow and cautious gait along with her decreased arm swing gave her a bradykinetic-like appearance and implied the presence of an underlying neurologic disease. However her neurological examination revealed no actual focal deficits and her EEG proved negative for seizure activity and encephalopathy.

She underwent both a CT scan and an MRI which revealed a dilatation of the ventricular system due to idiopathic aqueductal stenosis. This dilatation was slightly asymmetric in favor of the left hemisphere. Mild atrophy of the cerebral parenchyma was also noted.

The patient was also tested with neuropsychological and intelligence batteries which showed borderline intelligence. Her Rorschach Inkblot Test revealed reluctance in processing emotional stimuli, low self esteem, lack of effort and motivation, emotional immaturity and bluntness, repression of aggressive feelings and indicated the possible emergence of a perceptive disorder upon confrontation with unusual situations and stressful life events.

Although she scored 29 out of 30 on her Mini-Mental State Examination, losing only one point for language and praxis, she under-performed in the WAIS-R, receiving a full scale IQ score of 66. Furthermore, a significant discrepancy was noted between her verbal and her performance IQ scores; the patient receiving scores of 74 and 60 points respectively.

Her performance was particularly poor in the Block Design, Object Assembly, Picture Completion and Digit Span subtests, thus indicating a marked impairment of her spatial perception, visual abstract processing, visual details perception, attention and concentration.

Ms. A's symptomatology at onset, together with her current psychiatric presentation, initially narrowed down our diagnostic scope to differentiating between a case of Major Depressive Disorder with Psychotic Features and that of a Psychotic Disorder, mainly Paranoid Type Schizophrenia. Although her mental signs and symptoms at disease onset (i.e. 5 years prior to admission) fulfilled criteria of a major depressive episode, her current presentation lacked prominent affective features; the patient being emotionally flat and non-responsive. Thus, Paranoid Type Schizophrenia was chosen as our working diagnosis.

However, the subsequent and unexpected neuroimaging finding of NPH inevitably raised the question if this clinical entity could have influenced, triggered or predisposed the patient to the development of a psychotic disorder; furthermore, if Ms. A could qualify as a case of Psychotic Disorder due to a General Medical Condition.

Treatment course

Ms. A's lack of insight, along with the long duration of untreated psychosis, weighed in favor of initiating a long acting neuroleptic medication; in this case 50 mg of long-acting risperidone every 2 weeks. Additionally, she received a daily morning oral dose of paliperidone 9 mg.

After the first 6 weeks of treatment, she began to show signs of marked improvement primarily in her thought content disturbance and secondarily in her affective flattening.

The unwavering conviction by which she adhered to her delusional beliefs gradually receded and her persecutory delusions reduced in intensity. This was accompanied by an improvement in her ability for emotional investment and involvement.

A couple of weeks later, she was able to fully distantiate herself from her initially firm persecutory beliefs and recognize them as non-sensical.

Given her marked improvement, she received a weekly leave to visit her hometown. During this stay with her family, she was reported to be calm, sociable and friendly, even towards those relatives whom she used to picture as persecutors in her delusional system.

Although *Ms*. A showed typical neuroimaging findings of NPH, she did not clearly exhibit respective clinical manifestations. Of the classic triad (Hakim and Adams triad) of urinary incontinence, gait disturbance, and dementia only a mild cognitive impairment was substantiated in the neuropsychological and intelligence batteries.

In the ensuing neurosurgical evaluation, a conservative approach was recommended in the form of pharmacotherapy with a daily dose of acetazolamide 250 mg. Based on the neuroimaging and clinical findings, an invasive surgical procedure was deemed unjustified and unnecessary at the time of the examination. Ms. A was scheduled for a neurosurgical follow up and a new MRI after 6 months.

After 2 ½ months of compulsory inpatient care, she was released from our clinic on paliperidone and long acting risperidone. Her mental status examination on discharge revealed emotional responsivity, increased volition at initiating tasks, improved grooming and hygiene, and primarily no active paranoid ideation.

She was scheduled for monthly follow-ups at our outpatient clinic.

Discussion

A wide range of non-psychiatric medical conditions has the capacity to induce symptoms of psychosis. In this context, it has been suggested that thought and perceptual disorders could develop secondary to the damage caused by hydrocephalus with or without aqueduct stenosis.[1,2]

The cumulative probability of aqueduct stenosis and schizophrenia co-occurring by chance is very low; a finding that is not in accordance with the empirical data. If 0.8–1% of the population develop schizophrenia, congenital hydrocephalus occurs with a frequency of 0.5–1.8 per 1000 births, and between 11% and 43% of hydrocephalics have aqueduct stenosis, then schizophrenia and aqueduct stenosis should occur together in roughly 0.5–8 individuals per million.[3,4]

The relationship of aqueduct stenosis to hydrocephalus is unclear. It is thought that at times it may be involved directly in the pathogenesis of hydrocephalus, or it may develop as a sequel to it, perhaps resulting from compression.[3,5]

Non-tumoral stenosis of the Sylvian aqueduct is a rare developmental anomaly that usually presents in infancy and childhood, but it is well documented as being diagnosed in older patients over 17 years of age.[6]

Normal pressure hydrocephalus results from an obstruction in the subarachnoid space which impedes the normal flow of the cerebrospinal fluid. CSF normally flows from the basal cisterns over the cerebral convexities to the superior sagittal sinus where it is returned to the systemic circulation. The disorder has a variety of different underlying etiologies. These include hypertensive cerebrovascular disease, subarachnoid space occupying lesion or hemorrhage, chronic meningoencephalitis, residual changes following acute bacterial meningitis or spinal anesthesia and carcinomatosis of the meninges; but often there is no obvious cause (idiopathic cases).

Gait disorder is often the initial manifestation, typically in the form of gait apraxia characterized by apprehension or unsteadiness on standing and difficulty in initiating ambulation. Gait dysfunction is often described as broad-based and "magnetic".[7] It is also notable for impaired turning marked by the need for multiple small steps in order to effect a 180° turn.[8] The gait disturbance may be due to a number of factors, including disconnection of basal ganglia from the frontal cortex, paraventricular corticospinal fiber damage and uninhibited antigravity reflexes.[9–11] Extrapyramidal features in the form of hypokinesia,

bradykinesia and cogwheel rigidity have also been documented.[8,12,13]

Urinary incontinence is usually a later development and is thought to be due to damaged periventricular pathways to the sacral bladder center, resulting in reduced inhibition of bladder contraction.[14]

The dementia is characteristic of the subcortical type with prominent frontal lobe features, including psychomotor retardation, amotivation and apathy, resembling a picture of depression. NPH-related cognitive impairment is usually insidious in onset. Initially characterized by generalized slowing and apathy, global cognitive dysfunction ensues if untreated.[9] Based on previous neuropsychological data of apparently greater effect of NPH on executive function, attempts to identify an NPH-specific cognitive impairment profile have utilized tests relatively sensitive to frontal lobe function to examine whether such tasks are particularly susceptible to NPH-induced damage. Results of such studies reveal that there are two distinctive patterns of cognitive change in NPH:[8]

- Predominantly executive (only later becoming more global), frequently not relieved significantly by shunting
- Generalized dementia detectable by gross measures (e.g. MMSE), in which shunting can reverse dementia.[15]

Although there doesn't appear to be a common neuropsychological pattern in all hydrocephalic patients, various research results indicate a tendency to score low on the performance IQ of the WAIS-R, especially in the subtests that require attention and visuoconstructive functions.[16–18]

Normal pressure hydrocephalus presenting solely as a psychiatric disturbance (e.g. paranoid psychosis) without the classic neurological triad of gait ataxia, urinary incontinence and dementia has been documented. Positive psychotic symptoms were not the only handicaps reported. There was also deterioration in social behavior with social withdrawal and loss of concern for personal care, apathy, agitated depression, mania, sudden violent and self-destructive outbursts, aggression, argumentativeness and belligerence.[6,19–26]

As already mentioned above, communicating hydrocephalus is most likely the result of alterations in clearance and/or flow of CSF, causing ventricular enlargement and secondary susceptibility of brain parenchyma to mechanical and/or ischemic injury. Increased ventricular volume can stretch frontocerebellar nerve fibres as they circumnavigate the ventricles, disturbing gait and bladder function. Deranged ventricular CSF flow on adjacent basal ganglia structures might be responsible for the development of parkinsonian features.[8] It has also been suggested that a primarily altered CSF circulation may affect neuronal function in a way that contributes to or directly causes psychotic symptoms.[27]

The mechanism whereby NPH causes symptoms and damage to the brain is not fully understood. Adams et al[28] adapted Pascal's law of enclosed fluids as a possible explanation of the pathophysiology of this condition. They suggested that initially elevated CSF pressure leads to enlargement of the ventricles, but once enlarged they are maintained at that size, with lower and usually normal pressures. They focused on the concept of total CSF force rather than pressure as the critical factor in CNS damage. The total force on the ventricular walls by Pascal's law is the product of the CSF pressure (x) the surface area. Hence, as surface area increases, the total CSF force also increases despite the maintenance of a constant and presumably normal CSF pressure, with resultant ventricular dilatation and central nervous system damage. Furthermore, they argued that the fact that a given pressure results in greater force in the widest part of an enclosed system, provides an explanation for the greater differential enlargement of the lateral ventricles, especially the frontal horns, and hence, the appearance of predominantly frontal signs in NPH.[21]

Precise anatomical correlates accounting for the psychiatric and behavioral symptoms associated with NPH have not yet been established. However, certain anatomical regions have been known to be associated with particular behaviors and symptoms. For instance, ventricular enlargement due to aqueduct stenosis may present as a schizophreniform psychosis, mania has been associated with diencephalic and hypothalamic dysfunction, and temporal lobe abnormalities may cause episodic aggression.[6,9]

Davison & Bagley[29] in their extensive review concluded that schizophrenia-like illnesses with halluci-

nations and delusions were more common among patients with temporal-limbic or diencephalic dysfunction.

Schneiderian first-rank symptoms, involving thought insertion, thought broadcasting and thought blocking, as well as delusions of external influence, have been reported with limbic dysfunction produced by hydrocephalic processes.[30]

The brain dysfunction in idiopathic NPH (iNPH) is mainly in the frontal cortex. Because frontal lobe lesions are traditionally known to facilitate one's inability to integrate and correct perceptual distortions in the face of contradictory evidence, frontal lobe dysfunction may be integral in delineating the etiology of delusions in NPH.[31,32]

Based on anatomical observations concerning delusions, a tentative pathophysiological formulation could be suggested. CNS functions that are relevant to delusion formation include linguistic and verbally-mediated conceptual abilities processed by the left hemisphere, and visuospatial, perceptual and affective functions mediated by the right hemisphere. These functions interact with the limbic system in the assessment of the emotional significance of ongoing experience. The limbic system in turn has dense projections to the basal ganglia creating an integrated limbic-subcortical system that mediates mood, motivation and motion. Any cerebral lesion that disrupts limbic-cortical associations may cause abnormal emotional assessments and produce a delusional syndrome.[30]

Neuroradiological correlates include enlarged ventricles out of proportion to the prominence of cortical sulci, anterior third ventricle enlargement, downward extension of mammillary bodies, bowing of corpus callosum and a flow-void in the fourth ventricle on T2-weighted MRI. Studies using Single Photon Emission Computed Tomography and Positron Emission Tomography reported that patients with iNPH mainly presented hypoperfusion of the frontal lobe. Thus, the cognitive impairment can be attributed to accentuated damage in the frontal lobe.[8,21]

The question naturally arises as to whether these findings are similar to the ones reported in schizophrenic patients.

Neuroimaging studies of brain morphology in acute and chronic schizophrenia have also shown increased ventricular volume with the frontal horns being possibly slightly more enlarged than the rest of the ventricular system, increased ventricular-brain ratio (VBR), larger 3rd ventricle width and decreased thalamus size, a finding that could be consistent with periventricular injury.[33–36]

Furthermore, certain physiological and cognitive studies have implicated a dysfunction of the prefrontal cortex as the possible explanation for the cognitive deficits observed in schizophrenia.[37]

Hence, current knowledge suggests that dysfunction in the frontal lobe and subcortical structures, notably the mesencephalic and diencephalic regions of the brain, may play an important role in the etiology of the schizophrenic psychoses that are found in association with aqueduct stenosis.

In our patient, the barely noticeable typical NPH symptoms (i.e. mild cognitive impairment and bradykinetic appearance) were clearly overshadowed by the florid psychiatric symptoms that prevailed in the clinical picture. The incidence of NPH manifested predominantly with psychiatric features is unknown. Even if the occurrence should be low, efforts to reveal these patients seem well motivated since the condition is usually continuous or progressive. Additionally, it has been shown that in some cases such patients may benefit from neurosurgical procedures.[6,20–22,38]

Even if no direct association can be established between schizophrenia and normal pressure hydrocephalus due to aqueduct stenosis, it is still reasonable to assume that our patient's mild cognitive impairment may have rendered her liable to react in a psychotic manner towards stressful life events.

This case demonstrates the complexity of the psychiatric diagnostic process. Particularly misleading in our patient were the fairly clear-cut psychotic symptoms. Although there were no specific indications of NPH, some clues suggesting a possible organic factor were present; mainly the patient's minor gait disturbances and free family history of psychiatric disorder. The presence of mild extrapyramidal signs in the absence of recent or current neuroleptic medication should raise the possibility of other causes of these symptoms, such as the so called parkinsonian-dementia complex of NPH.[12,13,39–41] In complicated diagnostic problems, such as this patient presented,

where the presence of organic impairment is not clearly established on clinical grounds, the potential value of neuropsychological testing is also evident.[21]

Conclusions

Patients who present with soft non-localising neurological signs and mild cognitive deficits in association with prominent psychotic symptomatology should raise our index of suspicion and prompt the clinician to explore the existence of an organic factor contributing to a mental or behavioral disorder. Furthermore, our patient's marked improvement indicates that, in cases of NPH where the primary cause is treated conservatively, psychotic symptomatology could respond to 2nd generation antipsychotics.

Ψυχωσική συμπτωματολογία σε υδροκέφαλο φυσιολογικής τάσης

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Αριστοτέλειο Πανεπιστήμιο Θεσσαλονίκης, Θεσσαλονίκη

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Ο Υδροκέφαλος Φυσιολογικής Τάσης λόγω ιδιοπαθούς στένωσης του υδραγωγού του Sylvius αποτελεί μια χρόνια κατάσταση αυξημένης συσσώρευσης εγκεφαλονωτιαίου υγρού εντός των εγκεφαλικών κοιλιών, η οποία οδηγεί σε διάταση του κοιλιακού συστήματος και πίεση του παρακείμενου εγκεφαλικού παρεγχύματος. Εκδηλώνεται τυπικά με την προοδευτική εγκατάσταση γνωστικής έκπτωσης, διαταραχής της βάδισης και ακράτειας ούρων. Έχουν περιγραφεί, ωστόσο, περιπτώσεις της διαταραχής στις οποίες προεξάρχει η ψυχωτική συμπτωματολογία. Έχει προταθεί ότι ο υδροκέφαλος φυσιολογικής τάσης μπορεί, μέσω των δομικών βλαβών που επιφέρει στις γειτνιάζουσες εγκεφαλικές περιοχές, να οδηγήσει δευτερογενώς στην ανάπτυξη διαταραχών της σκέψης και της αντίληψης. Μολονότι δεν έχουν ανευρεθεί ακόμη οι ακριβείς ανατομικές συσχετίσεις, ορισμένες εγκεφαλικές περιοχές –πρωτίστως ο μετωπιαίος φλοιός, διεγκεφαλικές και μεσεγκεφαλικές δομές– έχουν ενοχοποιηθεί για την παθογένεση της υδροκεφαλικής ψύχωσης. Επειδή οι βλάβες του μετωπιαίου λοβού εμποδίζουν το άτομο να ενσωματώσει στοιχεία που διαψεύδουν τις αντιληπτικές του διαστρεβλώσεις και ως εκ τούτου να τις διορθώσει, η δυσλειτουργία αυτής της περιοχής πιθανώς έχει πρωτεύουσα σημασία στην κατανόηση της αιτιολογίας των παραληρητικών ιδεών στους υδροκεφαλικούς ασθενείς. Παρουσιάζουμε την περίπτωση μιας 30χρονης γυναίκας, η οποία νοσηλεύθηκε ακουσίως εξαιτίας διεγερτικής συμπεριφοράς, επιθετικότητας και παραληρητικών ιδεών δίωξης. Η νευρολογική της εξέταση φανέρωσε υποσημαινόμενη βραδυκινησία. Οι νευροψυχολογικές συστοιχίες και οι δοκιμασίες ελέγχου της νοημοσύνης αποκάλυψαν ελαφρά γνωστική έκπτωση και η αξονική τομογραφία εγκεφάλου κατέδειξε διάταση του κοιλιακού συστήματος λόγω ιδιοπαθούς στένωσης του υδραγωγού του Sylvius. Η ασθενής ετέθη σε αγωγή με αντιψυχωτικά 2ης γενιάς, επιδεικνύοντας καλή κλινική ανταπόκριση. Η άτυπη εικόνα του υδροκέφαλου στο παραπάνω περιστατικό υπογραμμίζει την αναγκαιότητα να διερευνάται πλήρως η πιθανότητα ύπαρξης υποκείμενου οργανικού αιτιολογικού παράγοντα σε όσους ασθενείς παρουσιάζουν προεξάρχουσα ψυχωτική συμπτωματολογία σε συνδυασμό με μαλακά, μη εστιακά νευρολογικά σημεία και ήπια γνωστικά ελλείμματα. Περαιτέρω, η καλή κλινική ανταπόκριση της συγκεκριμένης ασθενούς υποδεικνύει ότι, σε περιπτώσεις στις οποίες επιλέγεται η συντηρητική αντιμετώπιση της πρωτογενούς αιτίας, η υδροκεφαλική ψύχωση μπορεί να απαντήσει στη φαρμακευτική αγωγή με αντιψυχωτικά 2ης γενιάς. Με αφορμή αυτό το περιστατικό προχωρήσαμε σε μια σύντομη ανασκόπηση της βιβλιογραφίας.

Λέξεις ευρετηρίου: Υδροκέφαλος φυσιολογικής τάσης, ψυχωτικά συμπτώματα, ήπια γνωστική έκπτωση, δυσλειτουργία μετωπιαίου λοβού, άτυπα αντιψυχωτικά, παλιπεριδόνη

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Future scientific meetings
Προσεχείς επιστημονικές εκδηλώσεις

- **Royal College of Psychiatrists International Congress 2013, Edinburgh, Scotland, UK**
  2–5 July 2013
  Organizer: Royal College of Psychiatrists
  Contact: Mr David Williams
  E-mail: congress@rcpsych.ac.uk
  Website: www.rcpsych.ac.uk/congress
- **Oxford Summer School in Philosophy of Psychiatry with the theme: "Mind, Value and mental Health", Oxford University, UK**
  14–19 July 2013
  Organizers: Faculty of Philosophy and the Department for Continuing Education, Oxford University
  Collaboration: WPA Section of Philosophy and Humanities in Psychiatry
  Contact: Prof. Bill Fulford
  E-mail: kwm.fulford@philosophy.ox.ac.uk
  Website: http://www.conted.ox.ac.uk/courses/details.php?id=V560-2&utm_medium=email&utm_campaign=pop13
- **1ο Πανελλήνιο Συνέδριο Ψυχολογίας Κύπρου, Λευκωσία, Κύπρος**
  5–7 Ιουλίου 2013
  Οργάνωση: Παγκύπριος Σύλλογος Ψυχολόγων
  Χριστοδούλου Καρύδη 20, 3031 Λεμεσός
  Επικοινωνία: Καθ. Α. Δημητρίου
  Τηλ.: (+357) 700 055 30, Fax: (+357) 257 381 99
  E-mail: pasypsy@gmail.com
  Website: http://www.pasypsy.net
- **Best practice in psychological therapies for psychosis, Warsaw, Poland**
  22–25 August 2013
  Organizers: International Society for Psychological and Social Approaches to Psychosis (ISPS)
  Collaboration: International Society for Psychological and Social Approaches to Psychosis (Poland)
  Contact: Dr Brian Martindale, Mr Bloom
  E-mail: info@isps2013warsaw.pl
  Website: www.isps2013warsaw.pl
- **2013 World mental Health Congress of the World Federation for Mental Health, Buenos Aires, Argentina**
  25–28 August 2013
  Organizers: (a) The Argentinean Association for Mental health (AASM), (b) World Federation for Mental Health
  Conference Secretariat: The Argentinean Association for Mental health (AASM), Ayacucho 234, Buenos Aires, Argentina
  Tel/Fax: (+541) 149 521 923
  E-mail: info@wmhc2013.com
- **WPA Thematic Conference with the title: "Mental Health and Mental Illness: Focusing on Eurasia", Yerevan, Armenia**
  29–31 August 2013
  Organizers: Armenian Psychiatric Association
  Collaboration: (a) Armenian Medical Association, (b) National Institute of Health, Armenia
  Contact: Prof Armen Soghoyan
  E-mail: apsecretariat@apnet.am, soghoyan@apnet.am
- **9th European Congress of Mental Health in Intellectual Disability with the title: "New Horizons for mental health in intellectual and developmental disabilities", Estoril, Lisbon, Portugal**
  12–14 September 2013
  Organizers: European Association for Mental Health in Intellectual Disability (MH-ID)
  Collaboration: (a) World Psychiatric Association – Section Psychiatry of Intellectual Disability, (b) Feracerci © ARFIEE (Association de Research et de Formation sur l' Insertion en Europe)
  Contact: Dr Marco Bertelli
  E-mail: info@mhid.org, Website: www.mhid.org
- **The International Society on the Study of Personality Disorders (ISSPD), XIII International Congress on Disorders of Personality with the title: "Bridging personality and psychopathology: The person behind the illness", Copenhagen, Denmark**
  16–19 September 2013
  Organizers: Institute of Personality, Theory and Psychopathology (IPTP)
  Collaboration: (WPA Scientific Section on Personality Disorders
  Contact: Erik Simonsen
  E-mail: es@refionsjaelland.dk, Website: www.isspd2013.com
- **27η Πανελλήνια Διημερίδα Ειδικευομένων Ψυχιάτρων, 3rd International Meeting of Psychiatric Trainees, Αθήνα**
  21–22 Σεπτεμβρίου 2013
  Οργάνωση: Ελληνική Ψυχιατρική Εταιρεία (ΕΨΕ)
  Συνεργασία: Ένωση Ελλήνων Ειδικευομένων Ψυχιάτρων/European Federation of Psychiatric Trainees
  Γραμματεία: ΕΨΕ, Παπαδιαμαντοπούλου 11, 115 28 Αθήνα
  Τηλ.: (+30) 210-72 14 148, Fax: (+30) 210-72 42 032
  E-mail: psych@psych.gr, Website: www.psych.gr
- **Spanish Society of Psychiatry National Meeting with the title: "From classifications to the person", Seville, Spain**
  24–27 September 2013
  Organizers: Spanish Society of Psychiatry
  Collaboration: (a) Spanish Biological Psychiatric Association (b) Spanish Foundation of Psychiatry and Mental Health
  Contact: Dr Jose Giner
  E-mail: (a) jginer@us.es, (b) pepeginer@gmail.com, Website: www.psiquiatriavilla2013.org
- **63rd Annual Conference Canadian Psychiatric Association, Ottawa, Canada**
  26–28 September 2013
  Organizers: Canadian Psychiatric Association (CPA)
  Contact: Heather Clear
  E-mail: conference@cpa-apc.org, Website: www.cpa-apc.org
- **1st International Conference on Creative Psycho-pharmacotherapy with the title: "Psychopharmacology, new insights, philosophies or treatment and stigma and human rights of patients", Dubrovnik, Croatia**
  25–28 September 2013
  Organizers: (a) Croatian Society for Psycho-pharmacotherapy and Biological Psychiatry, (b) Croatian Medical Association
  Collaboration: Croatian Academy of Medical Sciences
  Contact: (a) Prof. Miro Jakovljevic, (b) Mr Nikica Zunic
  E-mail: (a) predstojnik_psi@kbc-zagreb.hr, (b) nikica.zunic@penta-zagreb.hr
  Website: http://iccp2013.com
- **4ο Πανελλήνιο Συνέδριο Αυτισμού, Θεσσαλονίκη**
  4–6 Οκτωβρίου 2013
  Οργάνωση: Ελληνική Εταιρεία Προστασίας Αυτιστικών Ατόμων-Παράρτημα Θεσσαλονίκης
  Γραμ. συνεδρίου: Κέντρο Ημέρας ΕΕΠΑΑ Θεσ/νίκης, Βερατίου 5
  Τηλ./Fax: (+30) 2310-241 287
  E-mail: 4opanelinio@autismgreece.gr
- **Επιστημονική Ημερίδα «Η ψυχική υγεία των ηλικιωμένων», Αθήνα**
  10 Οκτωβρίου 2013
  Οργάνωση: Ελληνική Ψυχιατρική Εταιρεία (ΕΨΕ)
  Συνεργασία: Παγκόσμια Ομοσπονδία Ψυχικής Υγείας,

Α' & Β' Ψυχιατρική Κλινική Πανεπιστημίου Αθηνών, Ψυχιατρικό Νοσοκομείο Αττικής, Δρομοκαΐτειο Ψυχιατρικό Νοσοκομείο Αττικής
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- **2ο Πανελλήνιο Συνέδριο Κολλεγίου Εκπαίδευσης Έρευνας, Πρόληψης & Θεραπείας Ψυχιατρικών Διαταραχών: «Συναισθηματικές Διαταραχές», Αθήνα**
11–13 Οκτωβριου 2013
Οργάνωση: Κολλέγιο Εκπαίδευσης, Έρευνας Πρόληψης & Θεραπείας Ψυχικών Διαταραχών, Α' & Β' Ψυχιατρική Κλινική Πανεπιστημίου Αθηνών
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Fax: (+30) 210- 68 27 409
E-mail: dpanakoulia@tmg.gr, Website: www.tmg.gr
- **2ο Πανελλήνιο Διεπιστημονικό Συνέδριο Ειδικών Ψυχιατρικών Νοσοκομείων, Αθήνα**
17–20 Οκτωβρίου 2013
Οργάνωση: 5ο Ψυχιατρικό Τμήμα Εισαγωγών, ΨΝΑ
Επιστημονική Συνεργασία: Ψυχιατρικό Νοσοκομείο Αττικής, Δρομοκαΐτειο
Τηλ.: (+30) 210-70 005 530, Fax: (+30) 210-25 738 199
E-mail: pasypsy@gmail.com
Website: http://www.pasypsy.net
- **3rd International Congress of Dual Disorders: addictions and other Mental Disorders, Barcelona, Spain**
23–26 October 2013
Organizer: Spanish Society of Dual Pathology
Co-sponsorship: (a) National Institute on drug abuse (NIDA), (b) World Psychiatric Association (WPA)
Tel.: (+34) 913 612 600, Fax: (+34) 913 559 208
E-mail: secretariat@cipd2013.com
Website: www.cipd2013.com
- **31st Brazilian Congress of Psychiatry, Curitiba, Parana, Brazil**
23–26 October 2013
Organizers: Brazilian Association of Psychiatry (ABP)
Collaboration: Sociedade Paranaense de Psyquiatria (SPP)
Contact: (a) Dr Antonio Geraldo da Silve, (b) Simone Paes, (c) Monica Leite
E-mail: (a) jsanaf551@terra.com.bg, (b) simone@abpbrasil.org.br, (c) monica@abpbrasil.org.br
Website: www.abpbrasil.org.bre/congresso
- **III International Congress Dual Disorders with the title: "Addictions and other Mental Disorders", Barcelona, Spain**
23–26 October 2013
Organizers: Spanish Society of Dual Pathology (SEPD)
Contact: Prof Miguel Casas
E-mail: secretariat@cipd2013.com
Website: www.cipd2013.com
- **8th European Congress on Violence in Clinical Psychiatry with the tiltle: "New Horizons in Interdiscliplinary Approaches", Ghent, Belgium**
23–26 October 2013
Organizers: (a) Oud Consultancy, (b) European Violence in Psychiatry Research Group (EViPRG)
Collaboration: (a) WPA Section on Art and Psychiatry (b) British Institute for Learning Disabilities (BILD) (c) Karolinska Institute, Contact: Mr N.E. Oud
E-mail: nico.oud@freeler.nl
Website: www.oudconsultancy.nl/GhentSite
- **5ο Πανελλήνιο Ψυχιατρικό Συνέδριο στην Πρωτοβάθμια Φροντίδα Υγείας, Λευκάδα**
25–28 Οκτωβρίου 2013
Οργάνωση: Ψυχιατρική Κλινική Πανεπιστημίου Πατρών
Επιστημονική Συνεργασία: Ελληνική Εταιρεία Γενικής Ιατρικής (Ελ. Ε.ΓΕ.ΙΛ.)
Γραμματεία Συνεδρίου: ERA Ltd, Ασκληπιού 17, 106 80 Αθήνα
Τηλ.: (+30) 210-36 34 944, Fax: (+30) 210-36 31 690
E-mail: secretariat@eipd2013.com
Website: www.cipd2013.com
- **13th International Forum on Mood and Anxiety Disorders, Monte Carlo, Monaco**
20–22 November 2013
Organizers: IFMAD (International Forum on Mood and Anxiety Disorders)
Conference Secretariat: Public Creations
74, Boulevard d'Italie-MC 98000 Monaco
Tel.: (+377) 97 973 555, Fax: (+377) 97 973 550
E-mail: ifmad@publicreations.com
Contact: Mrs Elena Parfenova
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- **1ο Πανελλήνιο Ψυχοφαρμακολογικό Συνέδριο Ελληνικής Ψυχιατρικής Εταιρείας «Θεραπευτικές Προσεγγίσεις των Ψυχικών διαταραχών», Ξενοδοχείο ΑΜΑΛΙΑ, Ναύπλιο**
6–8 Δεκεμβρίου 2013
Γραμματεία Συνεδρίου: ERA ΕΠΕ, Ασκληπιού 17, 106 80 Αθήνα
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- **Temperament, character, personality and the mood disorders spectrum, Thessaloniki, Greece, 15 December 2013**
Organizers: International Society on neurobiology and Psychopharmacology (ISNP)
Collaboration: WPA Section on Private Practice
Contact: Dr Kostas Fountoulakis
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Website: www.psychiatry.gr
- **National Association on Dual Diagnosis (NADD) International Congress, Miami, Florida, US**
7–9 May 2014
Organizers: NADD (National Association on Dual Diagnosis)
Collaboration: WPA Section Psychiatry of Intellectual Disability (SPID)
Contact: (a) Dr Robert J. Fletcher, (b) Dr Marco Bertelli
E-mail: (a) RFletcher@thenadd.org, (b) bertelli.fi@tiscali.it, Website: www.thenadd.org
- **WPA Thematic Conference with the title: "Neurobiology and treatment of psychiatric disorders and addiction", Warsaw, Poland**
5–7 June 2014
Organizers: Polish Psychiatric Association
Contact: (a) Dr Janusz Heitzman, (b) Dr Jerzy Samochowiec, (c) Ms Lenka Sliwkova
E-mail: (a) wpartcwarsaw2014@guarant.cz, (b) sliwkova@guarant.cz
Website: www.wpatcwarsaw2014.com
- **16th International Conference for Philosophy, Psychiatry and Psychology with the title: "Neuroscience, Logics and mental Development", Varna, Bulgaria**
26–29 June 2014
Organizers: (a) International Network for Philosophy and Psychiatry, Balkan, Academy for PPP "Athena Pallada", (b) Medical University of Plovdiv, Faculty of Medicine, Plovdiv, University "Paisii Hilendarski"
Collaboration: Royal College of Psychiatrists (Philosophy Special Interest Group)
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