PhD Thesis – Abstract

CLINICAL AND EPIDEMIOLOGICAL CORRELATION IN PSYCHIATRIC EMERGENCIES

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CRAIOVA, ROMANIA, 2010
I. GENRAL PART

The emergency psychiatry has various definitions but the most comprehensive is the one that defines emergency as an acute disturbance of behavior, thought or mood of a patient which if untreated may lead to harm, either to the individual or to others in the environment. The danger of harm to the society is also taken into account for psychiatric emergency, this aspect indicating the superior range of the impact on society.

In world literature is cited that psychiatric emergencies account for a significant proportion of total psychiatric referrals (18-43%) and subsequent admission (34-62%). There is also mentioned the great need of epidemiological data, without which modern management is unconceivable, in order to improve the infrastructure, the structure and the services at the level of the Emergency Rooms.

The most important reasons for Psychiatric Emergency Assistance are worldwide recognized the following:

- **violence outward directed** in which social, situational, and environmental factors combine with personality structure to generate aggressive behavior and self directed threatening persons after an attempt of suicide;
- **psychosis** with deterioration or increased symptoms which produces a lack of self-care or a refusal of treatment;
- "bizarre" behavior, objectionable or unusual behavior in a public place, which is thought to be due to mental illness;
- **medication problem**, the side effects of prescribed medications or a search for drugs to abuse may produce a visit to the emergency department.

The greatest emergency in the psychiatric domain seems to be the suicide behavior, the risk of which is higher for males than females, while women attempt suicide more often than males. Concerning age groups, adolescents seem to have a lower prevalence than the elderly. Specific groups for suicide attempts are the ones who have experienced a recent loss, who are in poor health, and who live in deprived socioeconomic circumstances.

Another important reason for presenting to the Psychiatric Emergency Room is the risk of violence, which is high in those societies where there is easier access to firearms and substances (alcohol, drugs) abuse. Specific psychiatric and medical disorders have also been associated with violent behavior, the most frequent "model" of violent patient is the unemployed young (<40 years) man, with low socioeconomic status, past
history of violence and who is usually non compliant with treatment. A threat to assault should always be taken seriously.

II. OBJECTIVES AND METHOD OF THE STUDY

This study has an aim to compare the epidemiological and clinical data between a study effectuated United Arab Emirates and the situation of the last five years (2004-2008) in the most important University Clinic in the South of Romania – 1st Psychiatric Clinic of Craiova. The results of this study will reveal the ethno-psychiatric similarities and differences in the types and frequency of psychiatric emergencies and the need of an specially organized infrastructure in order to deal with psychiatric emergencies in a most modern and applicable way. As well we obtained data considering the evolution of psychiatric disorders and psychiatric emergencies in these two regions (United Arab Emirates and Romania) in order to realize a model of organization and intervention of emergencies services.

The model proposed is up to date with the modern needs of psychiatric emergencies as well as with the entire spectrum of ethical, patient rights, confidentiality, ethnic and religious issues.

The research took place in two different practice set ups, representative for both the regions:

Abu Dhabi New Psychiatry Hospital (United Arab Emirates);

1st Psychiatric Clinic of Craiova (Romania).

To achieve the aims of the study, I effectuated a retrospective analysis and statistic analysis of the obtained data of the emergencies attended Abu Dhabi New Psychiatry Hospital (United Arab Emirates) during the period of one year from June 1, 2002 to May 31, 2003 (Study 1) and a retrospective analysis and statistic analysis of the obtained data of the emergencies attended 1st Psychiatric Clinic of Craiova (1954 patients) and the total number of inpatients in the same psychiatric hospital (7366 patients) during a period of five years (January 1, 2004 –December 31, 2008) (Study 2).

Due to highly restricted policy reasons considering patients confidentiality, ethical and religious issues, the data from the Abu Dhabi New Psychiatry Hospital (United Arab Emirates) were extremely difficult to be obtained, this is one of the reasons the data cover only the period from June 2002 to June 2003.

III. RESULTS AND DISCUSSIONS

In the Abu Dhabi Hospital were hospitalized in one year 250 patients in the Emergency Department, from whom 30% were diagnosed with psychosis, the suicide attempts, one of the models discussed, 12% and the drug side effects represent only 5%, percentage that is in conformity with the generally accepted values. The rate of suicide attempts is relatively high due to mixture of ethnical and religious population.

For a period of five years in the 1st Psychiatry Clinic of Craiova were hospitalized 1954 patients in the Emergency Department, from whom the depressive disorders has a relatively constant evolution around 43%, representing the most important reason for hospitalization, followed by psychotic disorders with a high percentage value in the second year of the study, 28.86%, and a medium value of 24.62% and the substances/alcohol related disorders with a medium value of 9.57%. The rate of suicide attempts have an inconstant evolution from 2.34% in 2004 (peak value) to a lowest value in 2007 (0.61%) and close values in 2005 and 2008 (0.89% and respectively 0.82%).
The ethno-psychiatric aspects in the emergencies are more obvious and important to the cohort studied in the Abu Dhabi Hospital, especially due to the fact that the population of this emirate is composed by a multiple ethnical and religious entities. This important aspect can be found in the repartition of the recorded data of the patients presented with psychiatric disorders showed that UAE nationality, the majority of population, represented 34% is followed by Indians with 24%, the other nationalities coming from Pakistan, Bangladesh, Sudan, Philippines, Indonesia, Somalia, Palestine, Jordan or Yemen are closely represented, around 2%. Concerning this mixture of nationalities is easily deductible that there is also a variety of religious beliefs. The belief of the majority of population (Islamic belief) influenced in an obvious way the results, especially the ones concerning the alcohol and other substances abuse (as it is well known, the use of alcohol being restricted by the Islamic belief), as well as the rate of suicide attempts. One of the significance differences between these two clinical set-ups is the fact that in Romania and especially in the south-west region, this ethnical and racial variety does not exist.

As it is well known, the depressive disorders represent one of the most important psychiatric diseases, fact that is valid as well for the Abu Dhabi New Psychiatric Hospital, where 13% of the patients presented in the emergency services for depressions, that is the second reason for hospitalization after the psychotic disorders. The ethno-psychiatric argument is also present for this disorder, the repartition per nationalities revealed a greater percentage to the Indians (24%), followed by the Pakistani (14%) and Bangladesh native residents (10%), results that indicated the risk for depression to the population formed by emigrants who cannot adapt to the socio-economical conditions of their new country.

As we mentioned above, the problem of suicide is the greatest emergency in psychiatry and for this reason we considered important to present and compare the rate of suicide for each region that compose the United Arab Emirates, two of which (Sharjah – 21% and Ajman – 13%) being the most representative regions from this point of view. The repartition per nationality revealed the fact that the Indian residents represented almost half of the suicide attempt cases (49%), followed by UAE and Indonesian with 17% respectively 10%, Palestinian and Philippines with 6%, this rates indicated as well that the impact of the emigration followed by depressive disorders on this populations. The sex repartition for suicide attempts is not in concordance with the international statistical data, our results revealing a balance between the number of female patients and male patients that committed suicidal attempt. The influence of social status (e.g. the difference between the residence statuses of the patients with attempt) can be explained by social inequalities, unemployment, migration issues, inadaptability, 86% male and 82% female from those who committed suicide represent the non-citizen population. For the Emergency Department of 1st Psychiatry Clinic of Craiova, the evolution of the number of the patients who committed suicide attempts and was hospitalized in between 2004-2008 has an inconstant evolution from 2.34% in 2004 (peak value) to a lowest value in 2007 (0.61%) and close values in 2005 and 2008 (0.89%).

The repartition for age and sex of the total number of patients presented in the Emergency Department of Abu Dhabi New Psychiatric Hospital revealed a greater prevalence for the age group between 20-30 years for male – 42%, close to 31-40 years – 40% and similar for female, 20-30 years – 39%, respectively 38% for the 31-40 years age group. The result of Chi square test is 1.67, with a value of 9.49 for the 95% limit (significant)
and a value of 13.28 for the 99% limit (high significant), this result showing us that is not a statistical significant difference in the repartition of psychiatric emergencies relative to the age and sex of the patients.

For the Romanian Clinic, a comparison by genders regarding emergencies in the studied five year period, male patients represented 54% (1056 cases) and female patients 46% (898 cases). Linking psychiatric emergencies to age we discovered that in the same time period the predominant age group was 31-40 years with 27% (526 cases), followed by the 41-50 years group with 24% (462 cases) and the age groups of 51-60 years with 18% (357 cases) and 21-30 years with 17% (329 cases). The sex distribution for the patients hospitalized in the 1st Psychiatry Clinic of Craiova through the Emergency Department in the period 2004-2008 presented significant differences, the chi square test resulting 9.80, in the situation of a significant limit of 95%, 9.49 and of highly significant of 99%, 13.28.

For the studied period, in the Emergency Department of 1st Psychiatry Clinic of Craiova (2004-2008) the repartition of psychiatric disorders showed that the most frequent psychiatric disorder is the depressive disorder (43%), the psychotic disorders with 25%, substances/alcohol related disorders with 10%, organic disorders with 8% and bipolar disorders with 5%, followed by anxiety and personality disorders, both with 3%, suicide attempts (1%) and medication side effects (0.5%). The evolution of depressive disorders has a relatively constant evolution, being in concordance with the total number of hospitalizations in the same period. The disorders related to substances and alcohol had for the same period a decreased rate in the first 4 years of the study (10.28% in 2004, 9.84% in 2005, 8.82% in 2006 and 8.56% in 2007), followed by an increase in 2008 to 10.41% that overtakes the past years.

One of the most important psychiatric disorders, the psychotic disorder, had a high percentage value in the second year of the study, 28.86%, followed by a percentage of 23% in the next three years, the lowest percentage being in 2004 – 21.96%, the obtained data being similar to the international data.

We also studied the reasons for hospitalization in 1st Psychiatry Clinic of Craiova in the time period 2004-2008. The specialist recommendation for 5062 patient cases (69%) is the main reason, followed by emergencies 26% (1949 cases) and family doctor recommendation 5% (345 cases). We can discuss with that from this three statistical entities family doctor recommendation is the only one that presented a flowing aspect, a significant decrease in the first years followed by a comeback to the its initial value during the last year (2008) of this study.

IV. CONCLUSIONS

1. Emergency represents one of the most important aspects of psychiatric services, due to the high grade of hazard that poses for the patient, its family or its carers and for the medical personnel implicated in their management. Data from literature confirm this fact, emergencies representing between 18-43% of the total psychiatric interventions, the percentage of hospitalizations consecutive to emergency intervention being of 34-62%. At the level of the Psychiatric Clinic of Craiova, in the studied period, January 1, 2004 – December 31, 2008, the percentage of emergency reached 26.53% of the total hospitalizations, value that is in concordance with those mentioned in the literature. The highest level was registered in 2008, 30.25%, in the other end being 2004 with 16.31%.
2. The distribution concerning sex and age groups of the hospitalized patients in the emergency department of the 1st Psychiatric Clinic of Craiova, from January 1, 2004 to December 31, 2008, indicated the following values: psychiatric emergencies were more frequent to men, 54.04%, compared to women with 45.96%, respecting the distribution by sex of the entire pathology hospitalized in the same time interval, the total of hospitalization of men being of 56.2%, while for women was 43.7%. The distribution by age groups of the hospitalized patients in emergency conditions indicated the highest numbers for the age group 31-40 with a percentage of 26.92%, followed by the 41-50 age groups with 23.64% and the 51-60 age groups with 18.27%. By sex, the most frequent age interval exposed to emergency, for men, was 31-40 years age group, with a percent of 25.00% while for women, the most exposed age interval was the same age group, 31.40 years, with 29.25% of cases.

3. Distribution based on the patient’s environment of provenience indicates mean values of 24.95% for men living in the urban areas and 19.42% for women from the same areas, for the patients hospitalized in the 1st Psychiatric Clinic of Craiova, while the data obtained for the patients presented in the emergency department are the following: men come from urban areas – 24.92% of the total number of patients and 29.12% come from rural areas, while for women, there was the following distribution: 20.52% from urban areas and 25.44% from rural areas, percents from the total number of the patients from the emergency department. It can be considered that psychiatric pathology, both to men and women, occurs mainly in rural areas.

4. Analysis of distribution of emergency emergencies on nosologic groups in the time interval, from January 1, 2004 to December 31, 2008, hospitalized in the 1st Psychiatric Clinic of Craiova revealed that for the entire studied lot, the most frequent emergencies were: depressive disorders (43.30%), psychotic disorders (24.62%) substances/alcohol related disorders (9.57%). A surprising element is the low share of the suicide attempts (1.13%), for the entire studied lot. The share of the emergencies was constant during the entire time interval studied.

5. Studying nosologic groups that led to emergency admission in the 1st Psychiatric Clinic of Craiova in the studied interval indicated that depressive disorders share hospitalized in the emergency department represented only 27.5% (846 cases) of total hospitalizations with the same diagnosis (3076 cases); psychotic disorders had a share of only 42.42% (481 cases) of a total of 1137 cases, emergencies due to pathology linked to alcohol reached 49.73% of a total of 372 cases. This analysis demonstrates the fact that beside the fact that they occupy the second and the third place in the ranking of the nosographic analysis of psychiatric emergencies, psychotic disorders and those linked to abuse of alcohol and substances present a superior index of gravity concerning symptoms, compared to depressive disorder that occupies the first place in the same ranking.

It is to be highlighted the fact that all 22 cases with suicidal behavior were hospitalized in emergency conditions. The rating based on clinical indicators of key symptoms that require urgent hospitalization would be the following: suicidal behavior, pathology linked to abuse of alcohol and substances, psychotic disorders and depressive disorders. This rating can be useful for medical practitioners in classifying emergencies in emergency room.

6. The reasons for hospitalization in the 1st Psychiatric Clinic of Craiova between 2004-2008 were analized in order to identify an index of adressability. The result indicated a percentage of 68.61% for the specialists recommendations, followed by emergencies 26.53%, family doctor recommendations with 4.77%,
while transfers reach 0.09%. This analysis indicates the need to increase the role of family doctors in the detection of psychiatric emergencies and to create a specialized department of psychiatric emergencies.

7. Analysis of duration of hospitalization in emergency pathology revealed the following: < 1 month 70.36%, < 1 week, 14.34% and < 3 months, 9.62%. The most common duration of hospitalization was the one to the limit of one month. Interesting is the correlation with the gravity of emergency pathology, because under one month of hospitalization is one third of the lot (29.64%), while the majority was represented by hospitalizations around three months. One day hospitalizations were 5.38%, while over six months hospitalizations were quasi-null.

8. Hospitalization of emergency cases was analyzed separately, by the time of admission in the clinic. The most common admissions were made in the range 8a.m. – 4p.m. (61.51%). During the night the most frequent was the range 8p.m. – 8a.m. (15.67%). For each year studied, the same distribution of emergency admissions according to time is maintained. This indicator can guide the organization of emergency services in psychiatric clinics.

9. The study of hospitalized psychiatric emergencies in the Emergency Department of the New Abu Dhabi Psychiatric Hospital between 2002 June 1st – 2003 May 31st indicated the following data: a greater prevalence for the age group between 20-30 years for male – 42.05%, close to 31-40 years – 40.34% and similar for female, 20-30 years – 39.18%, respectively 37.84% for the 31-40 years age group.

10. The nosographic distribution of emergencies hospitalized in the Emergency Department of the New Abu Dhabi Psychiatric Hospital evidenced the following: 30% were diagnosed with psychosis, depression 13.20%, alcohol and substances abuse related disorders, 12.80%, at the other end, the drug side effects represent only 4.80%.

11. Suicidal behavior (suicide attempts) in the Emergency Department of the New Abu Dhabi Psychiatric Hospital during the studied period, 2002 June 1st – 2003 May 31st were 31 (12.40% of total emergencies), being more frequent to women (17 cases, 54.84%, compared to men with 14 cases, 45.16%).

12. The comparative analysis between the two studied lots evidenced the existent differences of these lots. The main nosologic groups hospitalized as psychiatric emergency in the 1st Psychiatric Clinic of Craiova were depressive disorders followed by psychotic disorders and alcohol and substance related disorders, compared to those of the Emergency Department of the New Abu Dhabi Psychiatric Hospital, to which psychotic disorders overcome depressive disorders and alcohol and substance related disorders placed in the second and respectively third place. The main age groups were for both lots the 31-40 years age groups, following by the 20-35 years age group, also for men and women. Suicidal behavior, more frequent in the Emergency Department of the New Abu Dhabi Psychiatric Hospital, has no statistical relevance, being committed in their majority by the citizens of other nationalities.

The comparative study of diverse cultural and socio-ethnographic areas for psychiatric pathology requiring hospitalization in emergency conditions in psychiatric clinics is difficult, because of the limits that influence the study results, limits due to different perceptions of major psychiatric phenomena, to cultural foundation of the psychiatric conception in general and to different ways of statistical processing, in these conditions the present study representing an indicative try that can provide the starting point for future studies, indicating the critical points of the limitation in research in such conditions.
Psychiatric emergencies constitute a major problem of general medical assistance and of specialty regardless of the geographical or cultural set up in which is being analyzed, because of their importance and the gravity of the symptoms (depression, psychotic disorders and abuse of alcohol and substances), requiring a specific organization, which takes account, in addition to purely medical issues, and the specific area of cultural or ethno-social background.

V. REFERENCES

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