INVOLUNTARY HOSPITALIZATION OF PATIENTS WITH THE DIAGNOSIS: DELIRIUM, DEMENTIA AND OTHER COGNITIVE IMPAIRMENTS.

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In the case of the patients belonging to this category of diagnostic, fluctuating mental alteration is most frequently encountered at forms of moderate dementia. Delirium associated or not with withdrawal symptoms, frequently jeopardizes the person’s capacity of taking a decision, this leading to frequent involuntary hospitalizations. The purpose of this study is to highlight the bio-psycho-social and legal aspects of the patients’ involuntarily hospitalized suffering from delirium, dementia and other cognitive impairments. Material and method – it is a quantitative and retrospective study, and data have been processed from the observation charts of the patients involuntarily hospitalized between 2002 and 2012, suffering from delirium, dementia and other cognitive impairments. The group under study included 22 patients involuntarily hospitalized throughout 10 years in “Socola” Psychiatric Hospital, Iasi. Results – group distribution according to sex emphasizes that males are preponderant. The average age for females was 41%, while for males was 38.71%, which emphasizes age homogeneity according to sex (t=0.120; GL=21; p=0.732). The diagnostic of delirium, dementia or other cognitive impairments was confirmed at 77.3% of the patients involuntarily hospitalized. Conclusion - it is noticed the high frequency of the unemployed patients, which shows their difficulty of social functioning and reinserting, because of their altered cognitive, affective-emotional functions, whether behavioral or it is a consequence of the psychiatric patient’s stigmatization and marginalization. In psychiatry, the competence variability generates multiple ethic discussions. The cognitive functions being altered especially in the case of certain mental disorders, compromise the necessary conditions of a valid informed consent.
Among other categories of patients in which their capacity of taking decisions is reduced, or they cannot take a decision or their capacity of taking a decision fluctuates, some patients suffering from dementia, and organic brain disorders, are included. Besides dementia, some patients suffering from retardation can have problems of assimilating and understanding information as well (Crăciun et al. 2012). If in psychiatric medical care, healthcare legislation contains regulations related to involuntary hospitalization of the patient who does not have the capacity of taking a decision, the procedure of involuntary hospitalization of the patients with other medical problems without having the capacity of taking a decision, is an unsolved issue (Bryatt et al. 2006). The incompetent patient status, in which his autonomy is violated, can imply a paternalistic attitude from the medical team. The patient can be declared legally incompetent, this one being represented by a third person, usually his representative being a person from the family (Kitamura, 2000). In the case of dementia, no matter its type: Alzheimer, vascular dementia or any other form of dementia, the severe cognitive impairment is always correlated with incompetence (Kim et al., 2002), however, in the case of the other two forms of impairment, mild or moderate, the frequently fluctuating competence capacity is the subject of many ethic discussions.

The studies show that from the point of socio-demographic variables’ point of view, the reduced or absent mental capacity are frequently correlated with an inferior educational and socio-economic status (Wong et al., 2005). In the last 20 years, a special importance was given to the development of the evaluating mental capacity instruments (Dunn et al., 2006). According to some studies, the strongly associated factors with the reduced or absent mental capacity are involuntary hospitalization, mandatory treatment, the severity of the symptoms, and some psychosis (Okai et al., 2007). The patients with mental disorders, involuntarily hospitalized in the psychiatric hospital, are more frequently associated with the reduced mental capacity or mental incapacity, than the patients voluntarily hospitalized (Cairns et al., 2005a). Multiple studies have demonstrated that the severity rate of mental psychopathology is associated with the reduced or absent mental capacity (Wong et al., 2005).

For the patients involuntarily hospitalized in a psychiatric hospital for the first time, the associated factors with a reduced hospitalization period are related to the marital status, employed patient, high school studies, and who haven’t met the criteria for the diagnostic of dementia or schizophrenia (Segal, Burgess, 2006, Segal, Burgess 2009).

The important impairment of the cognitive functions, especially in the case of certain psychiatric disorders, often compromises the minimal conditions necessary for a valid informed consent. Also, there are cases in which the informed consent cannot be obtained or the informed consent is invalid for minors, some patients suffering from dementia, retardation, belonging to the vulnerable category (Cuenod, Gasser, 2003). In these situations, the request from the family, the GP, or the authorized organizations (representatives of the police, local administration, public prosecutor’s office, etc) for involuntary hospitalization according to the law of the mental health and of the people suffering from psychiatric disorders, is important.

Competency is a medical and legal concept, being closely related to the capacity of understanding the provided information (Appelbaum, 2007). The competency of taking a decision (Ghebaur et al., 2012) is an important element of the informed consent, depending on the capacity of voluntarily understanding, judging and deciding (Astarastoae et al., 2009). In current practice, it is automatically assumed that the adults are competent, capable of taking decisions, with certain exceptions that prove the contrary (Del Carmen, Joffe, 2005). Competency is fluctuating in some psychiatric disorders like Alzheimer dementia (AD) (Tataru, 2009), schizophrenia, etc (Gavrilovici, 2007), raising many ethical issues in research and psychiatric medical care. Legal incompetence is encountered at minors, because of their cognitive immaturity. In these situations, the legal representative or the personal representative (family) take decisions on behalf of the minors, both in medical care and in research. The most important system of evaluating the competences of the patients with psychiatric impairments is Mac Arthur Competence Assessment Tool evaluation instrument (MacCAT) (Ruissen et al., 2011).

Method:-
The group under study included 22 cases retrospectively analyzed from FO, the patients involuntarily hospitalized between August 2002 and July 2012 at “Socola” University Hospital Iasi. It is a quantitative, retrospective, analytical observational study, and data have been taken from the observation charts of involuntarily hospitalized patients throughout 10 years, according the law of mental health and the persons with psychiatric impairments, law no. 487/2002. For the group under study criteria of inclusion and exclusion the study have been developed. Of all the patients involuntarily hospitalized, we were interested in those suffering from delirium, dementia and other cognitive disorders.
The study was approved by The Ethics Commission of “Grigore T. Popa” U.M.F. Iasi, based on the protocol of the doctoral study, accomplished at the end of the first year of the doctoral studies.

The data have been gathered in SPSS 13.0 database, and processed with the statistical functions appropriate to them. In the statistical analysis both descriptive and analytical methods have been used. ANOVA Test highlights the qualitative aspects of an assembly, aiming at the relation between several parts of a group or interdependence connections between variables, at 95% significance threshold, using the following derivative indicators:
- Average value indicators: simple arithmetic average, median, module;
- Dispersion indications: standard deviation, variation.

Referring to calculation of the significant difference between the two averages, at 95% significance threshold, the t-Student test was used, a quantitative test based on the average and standard deviation for each group. For the parameters evolution, Paired Samples Test was used, which compares the average values within a single group, calculating the differences between the series of values of 2 variables and checks whether the average differs from 0. $\chi^2$ test is a non-parametric test, which compares 2 or more frequency distributions from the same population; it is applied when the expected events are excluded. Pearson correlation coefficient shows the linear association rate between two variables of the same group. In graphics $R^2$ coefficient was use, which represents square Pearson coefficient. $(y=ax+b)$ linear tendency highlights the prevalence evolution of an event after a monitoring period.

**Results and Discussions:**
The group distribution according to sex highlights that males are preponderant. Thus, only a quarter of the patients involuntarily hospitalized who belong to this category of diagnostics are females. The group distribution according to background shows an increased category from the urban area, only $\frac{1}{4}$ coming from the rural areas (Fig. 1).

The studies from the scientific literature showed that there are differences referring to sex, in the involuntarily hospitalized groups, more significantly for the male patients, comparing to female patients (Houston, Mariotto, 2001). The involuntary hospitalization rates in Croatia, for males, after 2000, highlight a significant increase comparing to females (Kozumplik, 2003).

![Fig. 1. Patient distribution according to sex and background](image)

The group distribution according to age groups highlights that the 30-39 group of age is preponderant. Thus, almost half of involuntarily hospitalized patients belong to this category (Fig. 2.)
The female age distribution was 41, varying between 30 and 51, while for males the average age was 38.71, varying between 24 and 71, which highlights the age homogeneity between sexes (t=0.120; GL=21; p=0.732) (Table 1). 

Table 1. Age Statistic Indicators According to Sex

| SEX     | N  | Mean | Std. Deviation | Std. Error | 95% Confidence Interval for Mean | Minimum | Maximum |
|---------|----|------|----------------|------------|---------------------------------|---------|---------|
| Female  | 5  | 41.00| 9.25           | 4.14       | 29.52 - 52.48                   | 30      | 51      |
| Male    | 17 | 38.71| 13.77          | 3.34       | 31.63 - 45.79                   | 24      | 71      |
| Total   | 22 | 39.23| 12.72          | 2.71       | 33.59 - 44.87                   | 24      | 71      |

The average age for the patients from urban areas was 40.06, varying between 24 and 71, while for the subjects from rural areas the average age was 37, varying between 28 and 60, which highlights the age homogeneity on background (t=0.244; GL=21; p=0.627) (Table 2). 

Table 2. Age Statistic Indicators According to Background

| Backgrounds | N  | Mean | Std. Deviation | Std. Error | 95% Confidence Interval for Mean | Minimum | Maximum |
|-------------|----|------|----------------|------------|---------------------------------|---------|---------|
|             |    |      |                |            | LowerBound                       |         |         |
| Rural       | 6  | 37.00| 12.07          | 4.93       | 24.34 - 49.66                   | 28      | 60      |
| Urban       | 16 | 40.06| 13.23          | 3.31       | 33.01 - 47.11                   | 24      | 71      |
| Total       | 22 | 39.23| 12.72          | 2.71       | 33.59 - 44.87                   | 24      | 71      |

For the group of the patients suffering from delirium, dementia and other cognitive impairments category of diagnostic analyzed, involuntarily hospitalized, the high frequency of unemployed patients is obvious (77.3%). Thus, a high frequency of patients with psychiatric impairments, involuntarily hospitalized, in the moment of hospitalization was unemployed (77.3%), followed by 18.2% of the patients with psychiatric impairments, who were pensioners, and only a small percentage were employees (Fig. 3).
According to the studies on involuntary hospitalizations from delirium, dementia and other cognitive impairments category of diagnostic, it was identified a frequency of 59.1% of single persons, to which it is added 9.1% of separated, divorced and widowed persons. (Fig. 4).

It should be noted that involuntary hospitalizations of patients suffering from delirium, dementia and other psychiatric impairments category of diagnostic, a maximum percentage (100%) were hospitalized as cases of emergency, without significant differences between sexes, background or age groups. Medical insurance was valid for 63.6% of the subjects suffering from delirium, dementia and other psychiatric impairments category of diagnostic, involuntarily hospitalized.

We wanted to highlight the frequency of hospitalizations in the psychiatric hospital for the patients suffering from delirium, dementia and other psychiatric impairments category of diagnostic, involuntarily hospitalized, as well as the frequency of hospitalizations for the patients with psychiatric impairments involuntarily hospitalized. According
to the number of former hospitalizations, most of the patients were at their first hospitalization (36.4%), yet there is an increased frequency of the subjects with more than 5 former hospitalizations (Fig. 5).

![Pie chart showing case distribution according to the number of days of hospitalization.](chart)

**Fig. 6. Case Distribution According to the Number of Days of Hospitalization**

We followed the relation between the number of days of hospitalization for the patient with psychiatric impairments, involuntarily hospitalized, and the diagnostic at discharge. A great number of involuntary patients, from this category of diagnosis (27.2%) have over 31-40 days of hospitalization in the psychiatric hospital (Fig. 6).

For the involuntarily hospitalized patients, comparing to voluntarily hospitalized patients, the period of hospitalizations is longer (Rosca et al., 2006).

![Pie chart showing diagnostic confirmation of admission.](chart)

**Fig. 7. Case Percentage in Which the Diagnostic of Delirium, Dementia and Other Cognitive Impairments Is Confirmed at Discharge**

Of the subjects with the admission diagnostic of delirium, dementia or other cognitive impairments, at discharge, this category of diagnostic was confirmed at 77.3% of the patients (Fig. 7).
The hospitalization of the patient with psychiatric impairments is made according to ICD 10 criteria of diagnostic.

The transportation of the person with psychiatric impairments, according to the law of mental health, law 487/2002 art.48 (law 129/2012, art. 57, paragraph 1), to the psychiatric hospital, is usually done with the service of the ambulance.

If the person’s behavior is potentially dangerous for himself or for the others, his transportation for hospitalization in the psychiatric hospital is done with the police, gendarmerie or fire departments.

The transportation of the patients with psychiatric impairments is made by respecting the dignity of the person with psychiatric impairments, following all the necessary measures of safety and physical integrity.

According to law 129/2012, art. 57, paragraph 2, if the transportation of the patient with psychiatric impairments will be done by using an ambulance, and he will always require a caregiver.

In the group under study, the transportation of the patients with psychiatric impairments for involuntary hospitalization in the psychiatric hospital was more frequently done by the family (59.1%), then in a smaller number, exclusively by the police and the ambulance representatives (18.2%), exclusively by the ambulance, 18.2%.

According to the law of mental health and the persons with psychiatric impairments, law 487/2002 art. 47, paragraph 2, involuntary hospitalization motivation of the patient with psychiatric impairments in the psychiatric hospital, according to the law of mental health, it is certified under signature by the persons who request hospitalization. Involuntary hospitalization motivation is accompanied by data about the applicant, the patient, specification of the circumstances which led to hospitalization and the known medical history.

Following the involuntary hospitalization criteria represents an aspect which demonstrates that the law of mental health and protection of the person with psychiatric impairments is known by the professionals in the field. According to involuntary hospitalization criteria in Romania, involuntary hospitalization is done only if the patient meets the two paragraphs in the article 45, law 487/2002, namely the existence of an aggressive (self-aggressive, hetero-aggressive) potential and the psychotic symptomatology.

**Self-aggressiveness** was highlighted among the involuntary hospitalization reasons at 27.3% of the patients suffering from delirium, dementia or other mental impairments, involuntarily hospitalized in the psychiatric hospital, and among 15.0% reasons for involuntary examination committee.

**Hetero-aggressiveness** was highlighted among the involuntary hospitalization reasons at 27.3% of the patients suffering from delirium, dementia or other mental impairments, involuntarily hospitalized in the psychiatric hospital, and 5.0% among the reasons of the involuntary examination committee.

**Both types of aggressiveness** were simultaneously highlighted among the involuntary hospitalization reasons at 27.3% of the patients suffering from delirium, dementia or other mental impairments, involuntarily hospitalized in the psychiatric hospital, and 15.0% among the reasons for the involuntary examination committee.

Hostile, violent behavior is associated with the young age and the onset, as well as with the single/not married person status (Raja, Azzoni, 2005, Constantin, Lupusoru 2015).
Of the coercive measures in psychiatry, mechanical entrapment is the most traumatized measure (Perkins et al., 2012). Restricting personal freedom, secondarily the entrapment (Kjellin, Wallsten, 2010), is usually seen by the patient as being harmful and unjustified (Katsakou, Priebe, 2006). The coercion, traumatizing procedure for the patient, has also a negative impact on the doctor-patient relation (Bonsack, Borgeat, 2007). Some studies followed the patient attitude towards coercion (Whittington et al., 2009), and its correct application in psychiatric care, using monitoring scales of the coercion measures throughout hospitalization (Swartz, Swanson, 2004). Isolation, coercion measure in psychiatry, is a managing the aggressive impulses measure of the patients with psychiatric impairments, as well as their psychomotor agitation. In such case, this procedure of controlling aggressive person behavior is ethically justified (Larue et al., 2009).

Mechanical entrapment in psychiatry is sometimes ethically and legally necessary and justified. We would like to highlight the necessity of the coercive measures in psychiatric care, according to the psychiatric patient symptomatology throughout hospitalization. The percentage of the patients who required coercive measures, like mechanical entrapment, involuntary hospitalized with the diagnostic of delirium, dementia and other cognitive impairments, was 36.4% (Fig. 8).

Although of all the coercive measure in psychiatry, mechanical entrapment is the most traumatized measure (Perkins et. Al., 2012), it is however necessary especially in case of emergency with an aggressive potential (Velea et al., 2015). The coercive measures (Höyer, 2002) are considered to be necessary and justified in psychiatry.

Conclusions:
The reduced or absent awareness of the disease leads to multiple involuntary hospitalizations, especially if it is associated with a form of aggressiveness or psychotic symptomatology. The high frequency of the unemployed patients shows their difficulty in functioning and social reinserting, due to either the impaired cognitive, emotional functions, or behavioral, or it is a consequence of the psychiatric patient stigmatization and marginalization. Mechanical entrapment throughout hospitalization, a measure with a protective purpose for the psychiatric patients, is more frequently encountered at the patients belonging to this category of diagnostic.

Disclosure of interest:
The authors declare that they have no conflicts of interest concerning this article.

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