Clinical and Biochemical Changes Induced by Alcohol at the Patients with Mental Illness

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Alcoholism use disorders are very frequent present all over the world. The use of alcohol is responsable for many behavioral symptoms like impulsivity, violence, depressive mood and anxiety. The aim of our research was to find the clinical and the biochemical changes induced by alcohol at the patient with mental illness.

Key words: alcoholism, mental illness, biochemical parameters

Alcoholism represents one of the most difficult problem, affecting an important number of people worldwide.

Alcoholism could be considered a bad custom or a real disease. It can be defined as an continue drinking use despite the negative consequences [1].

It is well-known that the use of alcohol is influenced by many factors . In some countries, this behaviour is a cultural factor, people use to drink to celebrate a happy event or an important day. In this case we can say that the use of alcohol get the importance of a family tradition.

Many international studies proves strong correlations between use of alcohol and cardiovascular disorders. Alcohol consumption is a trigger of cardiovascular affectation. An important percent of drinking alcohol patients presented the elevation of ST segment and the rate of miocardial infarction is higher comparing with the rest of the people [2- 4].

The risk of sudden death is higher at the patients diagnosticated with cardio-hepatic comorbidities. At this group of patients the use of alcohol for a long period of time increased much more the miocardiac infarction risk [5-7].

The use of alcohol is also associated with many methabolism disorder, especially in glucid disorder. The patients diagnosticated with diabetes mellitus presented a high risk of complications triggered by alcohol. This complications might me neurologicaly, oftalmologicaly or hidro-electrolytic [8-10].

Regarding mental symptoms it is well-know that the use of alcohol is often asociated with behavioural changes. Many studies highlights strong corelations between use of alcohol and impulsivity [11-12] .

The alcohol is very frequent used by the people in order to decrese depressive mood or anxiety, but unfortunaty the anxiolytic effect of alcohol is just temporary and the alcohol withdrawal is often associated with incresed level of anxiety and with the presence of negative sensations [13-15, 38].

Moreover, the use of alcohol decreases the quality of life of the patients in general and of the patients with mental illness in special. The level of stress is also incresease and the prognosis of the disorder is alterated by alcohol, too [16-18].

Experimental part
The aim of the study

Our study was develop between 1st March and 30th November 2018, in Neuropsychiatric Hospital of Craiova Romania.

A number of 89 subjects were involved in this research. All of the subjects were informed about the aim of the study and the participaton was optionaly.

The criteria for including a patient in our study were:
-To be diagnosticated with a mental illness in the past
-To be admited to the hospital in the perioad of our study
-To be known as an alcohol addicted.

We recorded demographic data as age, gender, envinromental area, occupational status, level of education, personal physiological history, somatic comorbidities history (cardiovascular, neurological, gastrointestinal, hepapatological, renal disorders etc.). Patients were questioned about smoking others customs like smoking, gambling or use of other substances.

The following laboratory blood counts were performed: hemoglobine , serum creatinine, serum urea, total cholesterol, HDL-cholesterol, triglycerides, uric acid, glicemya, liver enzymes.

All the patients have benefited by many medical examination like cardiology exam, internal medicine , neurology etc. in order to find any somatic complication caused by alcohol, being well-known that alcohol use is responsable for a lot of disorders.

The main aim of our research was to find the most important behavioural and biochemical changes induced by alcohol at the patients diagnosticated with mental illness.

Results and discussions
*The distribution of the subjects according to gender*

We realised an analize of the distribution of our subjects according to demographic data as gender, age and geographic area.

As we can see from the following table and chart, more than 64% of the patients involved in study were men.

This results are quite predictible and corelated with the results from scientific literaature which proved that worldwide the use of alcohol is much frequent at men comparing with women [19-21] .

gender	no
men	57
women	32

Tabel 1
DISTRIBUTION OF SUBJECTS BY GENDER

Chart 1. Distribution of subjects by gender
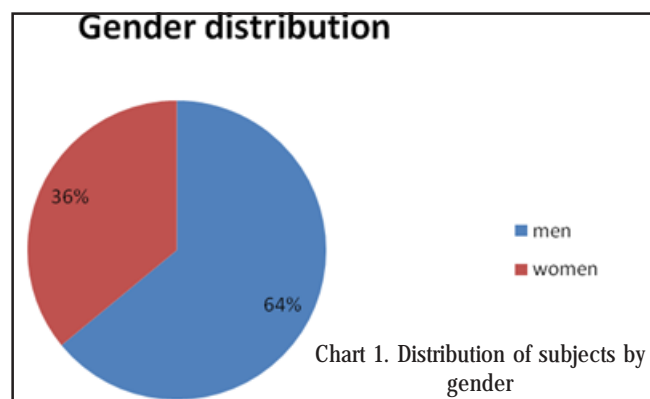
Regarding to the geographic area observed that the greatest percent of the patients are coming from the rural region of the country.

More than 80% of the subjects involved in our research are living in rural environment comparing with just 20% who are coming from urban regions.

This results are also corelated with the literature, if we admited that this study was developt in Romania, a country which is one of the countries with a high level of use of alcohol per inhabitant.More than this, in Romania, as well as in the Central and Est Europe, use of alcohol represents,

especially at the countryside, a cultural and socio-familial factor [22-23].

The distribution of the subjects according to geographic area is presented in table 2 and figure 2.

Geographic area	no.
rural	71
urban	18

Tabel 2
DISTRIBUTION OF SUBJECTS BY GEOGRAPHIC AREA

Chart 2. Distribution of subjects by geographic area
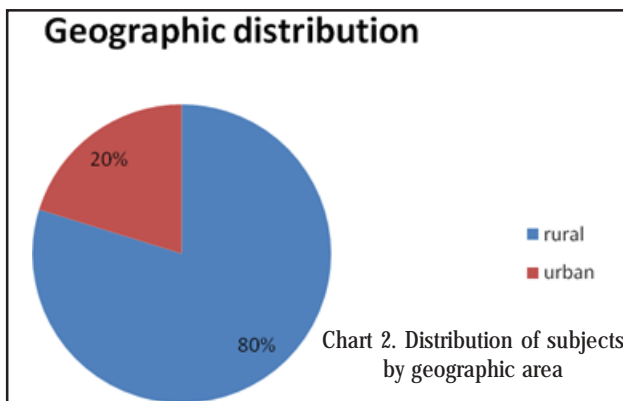
Age distribution shows us that 31 from 89 subjectes were between 40 and 49 years old. This group age represents the highest percent. We can say that the middle age people have the most dangerous behavior of using alcohol.

The second place is occupied by the subject with ages between 20 and 29 years old. This high percent registered for Romanian youths represents a serious alarm signal and an important criteria for developing more prevention programs in order to decrease the use of alcohol.

Distribution by age

Age distribution	age distribution
20-29	17
30-39	11
40-49	31
50-59	14
60-69	10
>70	6

Tabel 3
DISTRIBUTION OF SUBJECTS BY AGE

Chart 3. Distribution of subjects by age
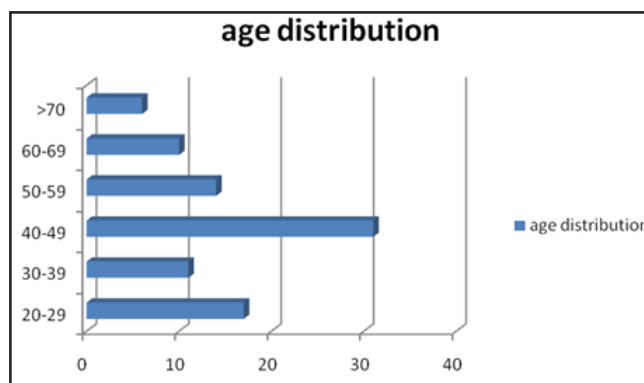
It is well-known that use of alcohol is associated with several mental illness. In our study we observed that the most of the patients with alcohol addiction were diagnosticated with majore depressive disorder (49 subjects). A number on 16 patients with bipolar disorder

and 15 patients with obsesive compulsive disorder presented high use of alcohol, comparing with just 2 patients with schizophrenia and 7 subjects dignosticated with dementia.

Distribution by psychiatric disorders

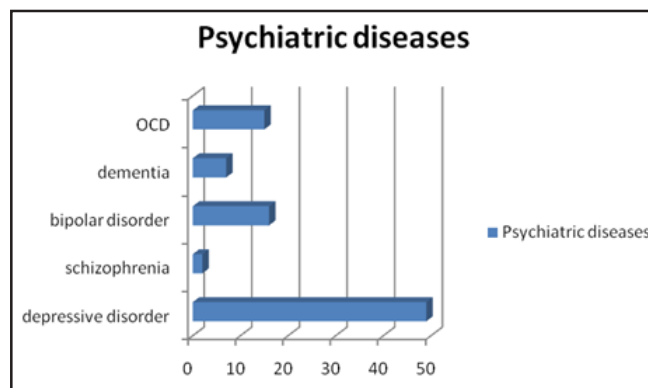| psychiatric disease	number of subjects
depressive disorder	49
schizophrenia	2
bipolar disorder	16
dementia	7
OCD	15

Tabel 4
DISTRIBUTION BY PSYCHIATRIC DISORDERS

Chart 4. Distribution by psychiatric disorders

Regarding the somatic comrbidities associated with alcohol use we can see in our study that the consumption of alcohol is responsable for many disfunctions of a couple of organs.

Around 40% patiens(35subjects) were before diagnosticated with at least one of cardio-vascular disorder. The cardiovascular disorders are followed by hepatic diseases(29 patients) and neurological disorders(17 subjects).

The predominance of cardiovascular diseases is corelated with the highest incidence of cardiovascular disorder in normal population and it is very important to initiate very early the specific tratement. Changing the life style might be useful for a large number of patient, but for a high percent of the people diagnosticated with cardiovascular disorder is it necessary an antiarrhythmic treatment correlated with cardiovascular intervention [24-26].

Tabel 5
DISTRIBUTION BY SOMATIC COMORBIDITIES

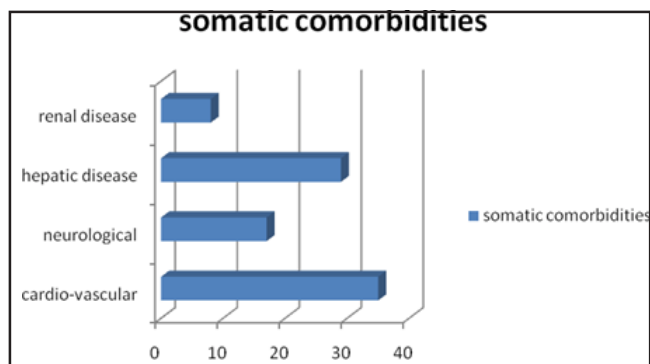| somatic comorbidities	number
cardio-vascular	35
neurological	17
hepatic disease	29
renal disease	8

Chart 5. Distribution by somatic comorbidities

Distribution by somatic comorbidies

Studing the alterations of blood parameters, we can highlight that liver enzymes represented the most affected blood parameter. The level of liver enzymes were incresead at 88 from 89 patients. Also the lipidic was very affected, more than half of patients registered high levels of triglycerides and cholesterol. The methabolism alteration produced by alcohol represented one of the worst effect of this addiction [27-32].

cholesterol	3
triglycerides	7
liver enzymes	8
blood glucose	7

Tabel 6
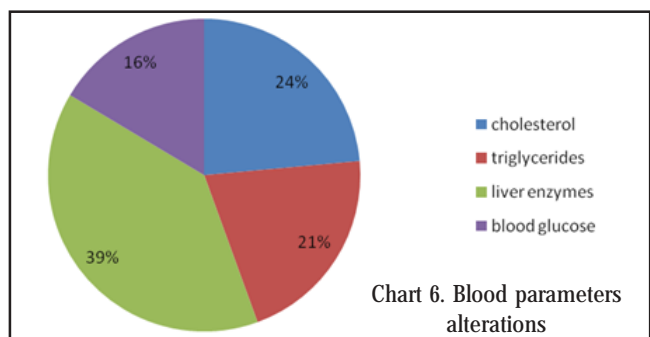BLOOD PARAMETERS ALTERATIONS

Chart 6. Blood parameters alterations

This results, show us again the negative effect of alcohol over all the metabolism and over all organs and systems [33-34].

Conclusions

Alcoholism represent one of the most frequent used substance with several effectes among people from every country.

In our study we wanted to highligh the clinical and the biochemical alterations produced by alcohol at the mental ill patients admited in the Psychiatric Department.

The highest percent was represented by men, between 40 and 49 years old, from rural regions of the country, but we cannot underestimat the risk of alcoholism at the women. Dates from literature attest the negative effects produced by alcohol especially at the pregnant women. [35-37]

The most patients diagnosticated with alcoholism problems were diagnosticated with depressive disorders and a great number of them had cardiovascular comorbidities.

The biochemical status of the blood was aslo disturbed by alcohol, more than 90% of the patients presented an incresed level of livel enzymes and half of the subjects involved in the study registered alteration of lipidic metabolims.

It is very important to implement a high number of national programs to prevent and to decrease the use of alcohol. It is also necessary a better colaboration between doctors from different departments in order to prevent and to treat the effects or the complications of alcohol use.

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