


<b>Comorbidity of Alcoholism with Other Nosologies</b>			<b>MEDICINE</b> <b>Addictology &amp; Toxicology</b>
		<b>Keywords:</b> alcohol abuse; co-occurring disorder; comorbid; disease.	
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<b>Abstract</b>			
<b>Introduction</b>			
Alcoholism is defined by the American Medical Association (AMA) as "a primary, chronic disease with genetic, psychosocial, and environmental factors influencing its development and manifestations."			
<b>Aim of the study</b>			
The aim of this study is to assess the co-occurring disorders or diseases, that are found in patients with alcoholism.			
<b>Materials and Methods</b>			
This is a retrospective study, carried out in the Department of Alcoholology and Department of Clinical Addiction and Toxicology, at the Mother-Teresa Medical Centre in Tirana. In our study, we included 330 patients, who were followed from January 2012 till June 2013. The diagnoses of alcohol abuse was based on lab exams and anamnesis.			
<b>Results</b>			
In this study, we included patients who were hospitalized and treated at the Mother-Teresa Medical Centre in Tirana, between January 2012 and June 2013.			
Neuropathias are the most common disorder in these patients, reflected by 26.6% of the cases. Moreover, the most common disease observed in these patients is Alcoholic Hepatopathy (13,6% of the cases), followed by 12,4% with multisubstance abuse.			
<b>Conclusion</b>			
Our data show that various diseases such as mental disorders, hepatopathy and polineuropathy are the nosologies that more often accompany alcoholism.			

## Introduction

Alcoholism is a chronic primary disease influenced by genetic factors, psychosocial factors and environmental factors. All these contribute in the development and manifestation of the disease. Alcoholism is one of the most costly health care problems faced by society, with an estimated societal cost (which includes, for example, productivity costs associated with alcohol-related morbidity and mortality, treatment costs, and costs associated with alcohol-related crime and traffic crashes) of \$184.6 billion dollars per year (Harwood et al. 2000). Alcoholism is often progressive and can be fatal. It is characterized by an impaired ability to control alcohol consumption, eagerness to drink, alcohol use despite its side effects and impairment in thinking. Each of these symptoms may be periodical or continuous.

Based on the classification by the Diagnostic and Statistical Manual of Mental Disorders (4th Edition), alcohol abuse can be described as Heavy alcohol consumption despite health, social and interpersonal problems that are caused by it.

- Chronic disease where physical and mental dependence to alcohol are observed

According to NIAAA (National Institute on Alcohol Abuse and Alcoholism): Alcoholism, or as otherwise known “alcohol dependence”, is a disease that includes the 4 following symptoms:

1. Craving: the urgent desire to drink
2. Loss of control: To be unable to quit drinking after he/she has started drinking
3. Physical dependence with symptoms like nausea, sweat, shivering of legs and arms, and anxiety after quitting to drink.
4. Tolerance: the necessity to drink large amounts in order to “get pleasure”

**A.** Alcohol abuse is a maladaptive pattern of drinking, leading to clinically significant impairment or distress, as manifested by at least one of the following occurring within a 12-month period:

- Recurrent use of alcohol resulting in a failure to fulfill major role obligations at work, school, or home (e.g., repeated absences or poor work performance related to alcohol use; alcohol-related absences, suspensions, or expulsions from school; neglect of children or household)
- Recurrent alcohol use in situations in which it is physically hazardous (e.g., driving an automobile or operating a machine when impaired by alcohol use)
- Recurrent alcohol-related legal problems (e.g., arrests for alcohol-related disorderly conduct)
- Continued alcohol use despite having persistent or recurrent social or interpersonal problems caused or exacerbated by the effects of alcohol (e.g., arguments with spouse about consequences of intoxication).

**B.** Never met criteria for alcohol dependence.

There are two type of alcoholics: 1- alcoholics that have the tendency to develop antisocial behavior and consume alcohol to feel happier and get pleasure and 2- alcoholics who have anxiety issues and can tolerate longer periods without drinking, however they cannot quit easily from alcohol consumption once they have started.

*Binge drinking* (or heavy episodic drinking) is another form of alcohol abuse where consumption of alcohol is done with the intention of becoming intoxicated over a short period of time but not often.

Alcoholism involves periodic or constant impaired control over drinking, distorted thinking and use and abuse of alcohol despite its adverse consequences.

Alcohol abuse is the intentional overuse of alcohol, which includes occasional and celebratory overdrinking.

It is known that long and uncontrolled alcohol abuse causes major health problems in various organs such as liver, cardiovascular system, peripheral and central nervous system etc. From all the organs, liver is the most effected. Alcohol induced Hepatic cirrhosis and hepatic insufficiency are the two most common liver diseases.

### **Aim**

The aim of this study is to assess the medical deregulations that are found in patients suffering from alcoholism.

### ***Materials and Methods***

This is a retrospective and prospective study, carried out in the Department of Alcoholology and Department of Clinical Addiction and Toxicology, at the Mother-Teresa Medical Centre in Tirana. In our study, we included 330 patients, who were followed from January 2012 till June 2013. We based the diagnosis on lab exams and anamnesis.

### **Results**

In this study, 330 patients who were hospitalized and treated in the “Alcohol Dependence Treatment Clinic” at the Mother-Teresa Medical Centre in Tirana were included and followed for a period of time between January 2012 and June 2013. All patients had alcohol- consumption related problems such as chronic alcoholism. The cohort was made of 3 females and 327 males. The median age group was 43 (22-81 year old). The average hospitalization time was 5,5 days (2-31 days in the hospital). The highest number of patients comes from Tirana (n= 110) (**Table 1**), because of the fact that Tirana not only has the highest number of habitants in Albania, but also medical services are more accessible in this city. Only a few patients come from other areas such as Durres, Elbasan, Kukes etc. (See **Table 1**).

**Table 1: Geographic distribution of patients**

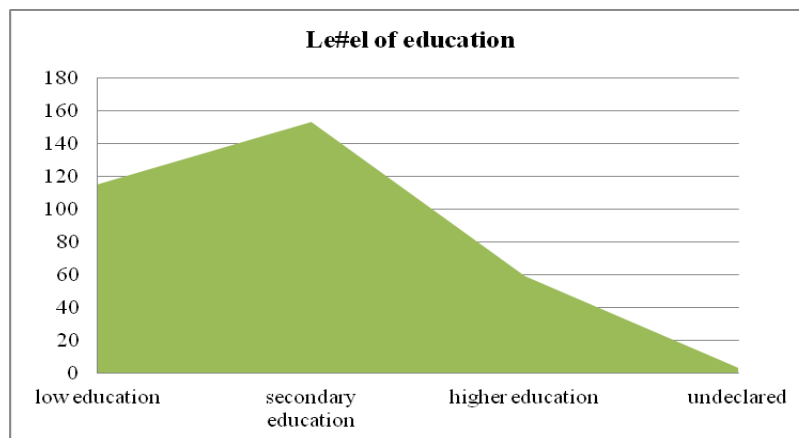
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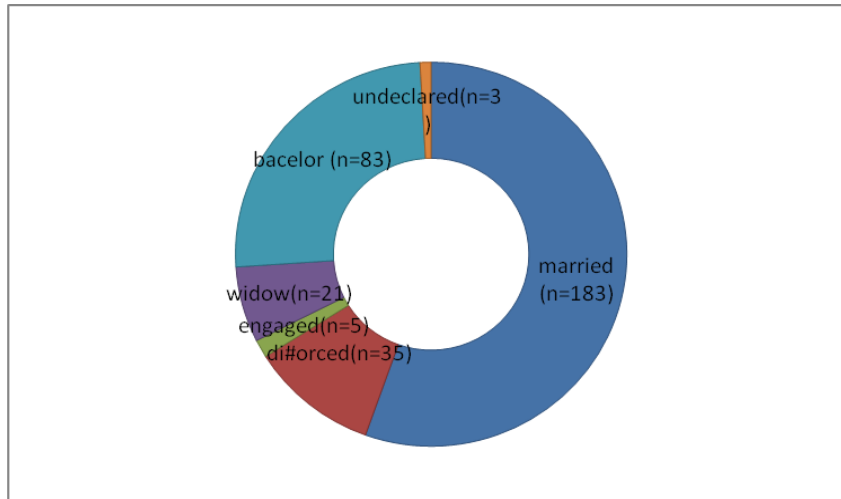
The majority of the patients (approximately 179 patients) are part of the Binge Drinking group type, meaning that they drink alcohol beverages approximately once a week; however the amount is large and leads to drunkenness. This type of alcohol abuse is most common in youth. The average age in this type of alcohol abuse is 37. Older patients often consume alcohol everyday and drink different amounts. The period of alcohol use varies from 2 to 40 years, with an average period of 14,2 years. The highest number of patients (n= 203) are married, however the number of patients that were single at the time of the study is considerable. Regarding education, the majority of the patients have a high school degree (n= 153), while 3 of them have not declared their education status. As for employment status, 163 patients have declared themselves as unemployed, and 3 of them were students. (see Table 2)

**Table 2: Patients according to they employment status**

Employment status	Number
unemployment	141
employment	163
pensionist	14
Invalid	7
students	3

**Graphic 1: Level of Education**



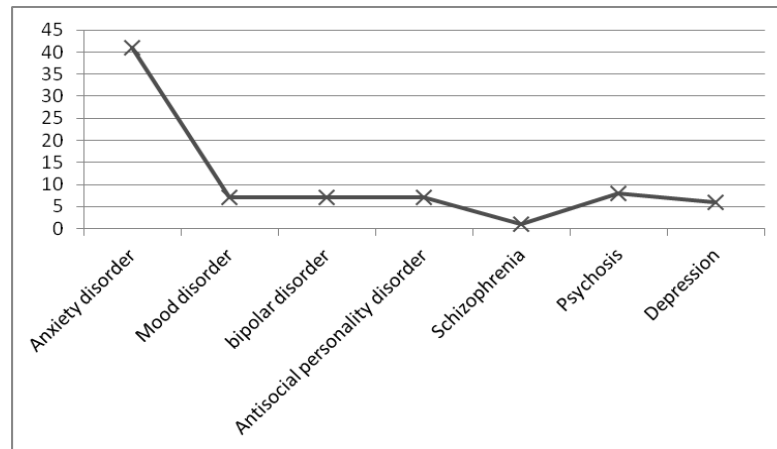
**Graphic 2: Patients according to civil status**

In this study, the data on medical diseases or disorders that occur in these patients are obtained from questionnaires regarding patient's health history and medical consultations with doctors of other specialties such as neurology, gastro-hepatology etc.

Our data show that 45,7% of the patients (n=151) do not suffer from any disease co-occurring with alcohol consumption. 41,8% of the patients is diagnosed with dual diagnosis (for example: major mental health disorder and alcohol addiction); 12,5 of the patients have 3 co-occurring disorders.

Polineuropathy is a nosology, that is found to accompany alcoholism. In our study we found polineuropathy the most often comorbid disorder. It was found in 88 (n=88) patients, or 26.6% , from which 35.2% had Korsakoff syndrome, and 3.4% had epilepsy. 61.3% of these patients were diagnosed just Neuropathy without specified it.

From all the co-occurring disorders or comorbid diseases, the ones that are often observed in these patients are the mental health disorders (MHD) which are reported in 50.9% of the cases with dual diagnosis and 23.3% of the total cases in this study. The most observed mental health disorder is Anxiety disorders which accounts for 53.2% of all MHD. Generalized Anxiety Disorder (GAD), is the most prominent disorder of all Anxiety disorders - 92.6% versus 7.4% that is Post-traumatic stress disorder (PTSD). Then are: Mood disorders and Antisocial personality disorder, each of them accounting for 11.6 % of MHD and bipolar disorders with 9.09% of MHD.

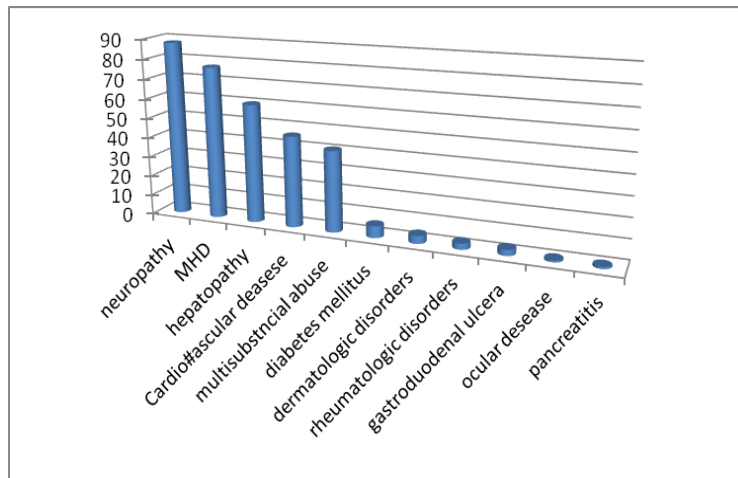
**Graphic 3: Mental health disorders co-occurring with alcoholism**

In third place, the most common comorbid disease is the Alcoholic Hepatopatia, found in 25.1% of the patients with comorbid diseases and in 13,65 % of the total patients included in this study. 11.2 % of patients had hepatic cirrhosis.

An important group of diseases also found in these patients are the cardiovascular diseases which are observed in 25,7% of the patients with other comorbid diseases. The most common one is the Arterial Hypertension which accounts for 20,1% of the cases and other cardiac deseases accounts for 11.7 % of patiens with comorbid desease: alcoholism and cardiovascular disorders.

Multisubstance abuse was found to accompany alcoholism quite often: 12.4% of these patients were diagnosed with alcoholism and other substance use disorders. From these, the most abused substance with alcoholism was marihuana and hashish, which accounts for 46.3%, then is heroin abuse in 29.2%, and cocaine abuse and benzodiazepine abuse each of them accounts for 12.1% of multisubstance use disorders. In some cases it was noticed alcoholism and 2-3 kinds of other substance use disorders in the same time, for example 13.7 % of patients had alcoholism and hashish abuse, heroine abuse and benzodiazepine abuse disorders.

Besides these main nosologies, or co-occurring disorders, we found also some other deseases to accompany alcoholism at our patients, such as diabetes mellitus (1.8%); dermatologic disorders (1.2%); gastroduodenal uclera and reumatologic disorders (each of them was found in 0.9%), pancreatitis, eye disorders and hepatitis B(2.4%).

**Graphic 4: The overall diagnoses accompanying alcoholism in these patients**

## Conclusion

Based on this study, the chronic polyneuropathies are the most common co-occurring deregulations with alcohol consumption such as alcohol abuse, chronic alcoholism. Other health problems that occur in patients that have alcohol-related diagnosis are mental health disorders, multisubstance abuse, alcoholic hepatopathy, and cardiovascular diseases.

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