

ANALYSIS OF HOSPITAL MORBIDITY IN LIVER CIRRHOSIS

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Abstract

Liver cirrhosis has become a major public health problem. The intervention upon risk factors, through the application of preventive measures and health education, has resulted in decreased morbidity and fewer complications associated with liver cirrhosis. In this paper we aimed to analyze morbidity through cirrhosis, which is indispensable for the study of risk factors, disease prevention, the accurate monitoring of patients and the distribution of technical and logistical means to fight this disease. Cases of liver cirrhosis, having been registered in Oradea in the period 2007-2009, were assessed. The patients with liver cirrhosis represent 49.25% of all hospitalized patients with chronic liver diseases. The cases of alcoholic cirrhosis represent 17.36%. 77.22% of these patients are male, and 59.96% come from urban areas. 40.41% are included in the 50-59 years age-group; nutritional cirrhosis is predominant in people over 50 years (74%) while alcoholic cirrhosis is typically encountered at ages between 30 and 50 years (72%).

Key words: liver cirrhosis, hospital morbidity, disease, risk factors

INTRODUCTION

Lately the number of cirrhosis cases has been increasing. Infectious causes play an important role in the etiology of cirrhosis in our country, most of them being caused by the hepatitis virus (Ciurea T, et al., 2003). Nutritional cirrroses are associated with deficiencies in protein, lipotropic factors and vitamins (Ginès P, et al, 2004). Among the toxic causes of cirrhosis, alcohol – through its steatogenic action, accompanied by nutritional deficiencies, rank first (Grigorescu M, 2004, Grant BF, et al, 1988). More rarely industrial toxins are incriminated (organophosphorous compounds, hydrogen arsenate, carbon tetrachloride, deratization substances, insecticides) and, lately, drugs with aggressive action upon the liver (Guevara M, et al, 2005, Wong F, et al, 2001). Biliary cirrroses are usually caused by the stagnation of the bile, which may be due to extra-hepatic obstructions. Dismetabolic (obesity, diabetes) and endocrine (hyperfolliculinemie, hyperthyroidism) causes have also been incriminated in the etiology of cirrhosis (Ginès P, et al, 2004). Alcohol abuse and type B viral hepatitis are the main causes of liver cirrhosis. In some countries, such as France, the alcoholic etiology prevails, while in our country the viral etiology predominates (Angelini G, et al, 1985). The age with the highest incidence is between 45 and 60 years, but early signs are usually identified between 35 and 50 years. A more recurrent presence in males may be observed (D'Amico G, 2003).

The purpose of this study is to evaluate the number of liver cirrhosis cases, in order to identify those categories of people that, in correlation with cirrhosis, may be of interest primarily in the application of preventive measures and health education; it also aims to establish common elements and correlations between cirrhosis-associated morbidity and some socio-economic and cultural parameters.

MATERIAL AND METHODS

The observational - retrospective and descriptive - study, conducted in the Emergency County Hospital of Oradea, in the period 2007-2009, allowed us to gather population data concerning the annual number of liver cirrhosis cases registered in this area. Primary data source was represented by observation forms of patients, diagnosed with nutritional or alcoholic cirrhosis and recorded in the departments of Gastroenterology of the Hospital. The methods used were the measurement, the description and the analysis of liver cirrhosis cases.

RESULTS AND DISCUSSION

The number of chronically ill persons diagnosed with liver diseases (chronic hepatitis and cirrhosis), hospitalized in the County Emergency Clinical Hospital of Oradea, in the period 2007-2009, was of 1070 people. Of these, patients with liver cirrhosis represented 49.25%.

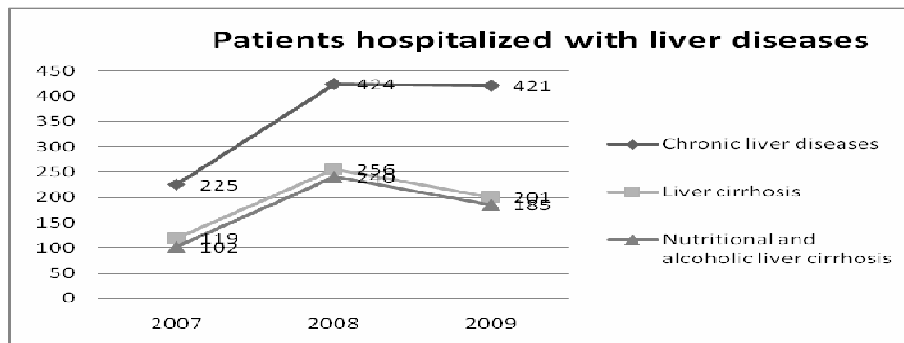


Fig.1. – Patients hospitalized with liver diseases in the County Clinical Hospital of Oradea, in the period 2007-2009

More than 20 diseases, which can progress to cirrhosis, are already known, but among the most common causes one can mention chronic hepatitis B, C and D ($\approx 25\%$) and the alcoholic liver disease ($\approx 20-40\%$). Of all patients hospitalized with cirrhosis, nutritional and alcoholic clinical forms represent 91.49% of the cases. The distribution of the two clinical

forms of the liver disease is represented in Fig.2. Patients with alcoholic cirrhosis represent 17.36% of all patients hospitalized with liver cirrhosis.

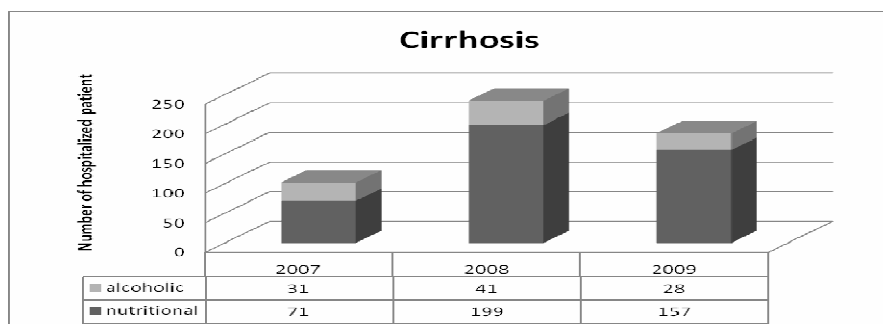


Fig.2 - Patients hospitalized with nutritional and alcoholic liver cirrhosis in the County Hospital Oradea, in the period 2007-2009

The National Program for the Evaluation of the Population's Health Status has been implemented in our country in the years 2007-2008 (medical examinations consisted of: anamnesis, clinical examination with detailed recording of pathological changes in patients' files, detection of heart disease, cerebrovascular diseases, and any other diseases with major impact on the health of the population), which led to the detection of pre-existing conditions and the revaluation of existing diseases. This is reflected in the analysis of liver cirrhosis morbidity, the number of hospitalized patients in 2008 being much higher than in 2007 (a doubling of hospitalized patients with chronic liver disease).

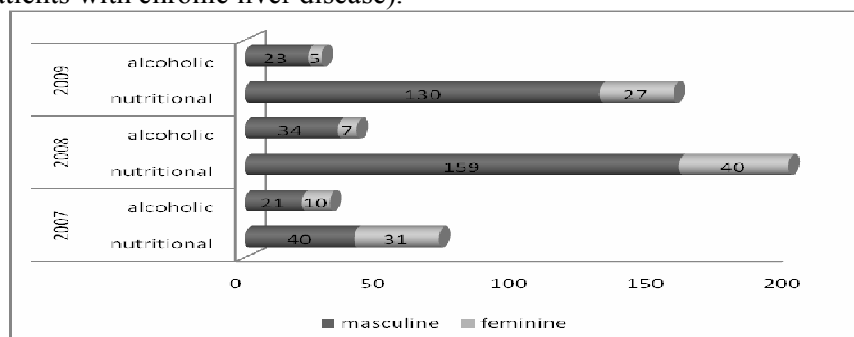


Fig. 3 – Distribution of patients with liver cirrhosis hospitalized in the County Clinical Hospital of Oradea, in terms of clinical forms of disease and sex, in the period 2007-2009

The analysis of patients with liver cirrhosis by gender reveals that 77.22% are male, and in relation to clinical forms, both in the case of nutritional cirrhosis and in the case of alcoholic cirrhosis men also prevail - 77.04% , 78.0% respectively (Fig. 3).

Most patients come from urban areas, approximately 59.96% of them living in cities, where environmental risk factors for this type of disease are more numerous (Fig. 4).

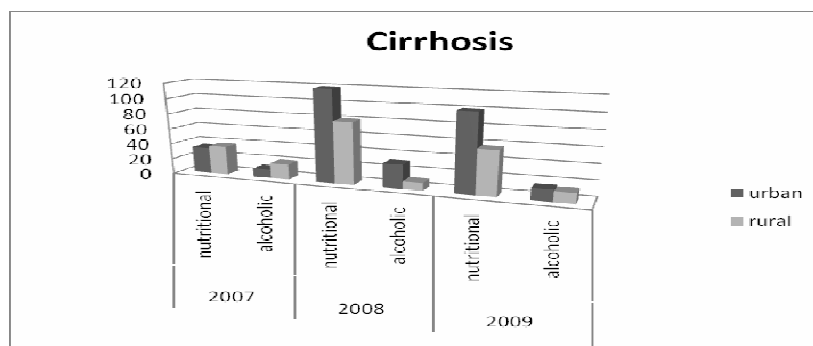


Fig. 4 – Distribution of patients with liver cirrhosis hospitalized in the County Clinical Hospital of Oradea, in terms of clinical forms of the disease and the areas of origin, in the period 2007-2009

The analysis of cases by area of origin and forms of cirrhosis (Fig. 4) reveals that clinical forms of nutritional cirrhosis are more numerous in urban, as compared to in rural areas (59.25%); the same holds true for the case alcoholic liver cirrhosis (57 %). An exception occurred in 2007, when hospitalized patients coming from rural areas were more numerous than those coming from urban areas, in both forms of cirrhosis: nutritional 52.11% and alcoholic 64.51%.

In the period 2007-2009, almost half of hospitalized patients, 40.41%, were aged between 50-59 (Table I).

Table I

Liver cirrhosis	2007	2008	2009	Total	%
under 30 years	1	0	0	1	0.18
30-39 years	10	24	13	47	8.91
40-49 years	20	41	41	102	19.35
50-59 years	32	101	80	213	40.41
60-69 years	27	51	32	110	20.87
Over 70	12	23	19	54	10.24
Total	102	240	185	527	100

Distribution of patients with liver cirrhosis hospitalized in the County Clinical Hospital of Oradea, by age groups, in the period 2007-2009

In relation to the clinical forms of cirrhosis, there are differences by age-groups, nutritional cirrhosis being predominant in people over 50 years (74% of hospitalized patients), while alcoholic cirrhosis predominates at ages between 30 and 50 years (72% of hospitalized patients) (fig.5, 6).

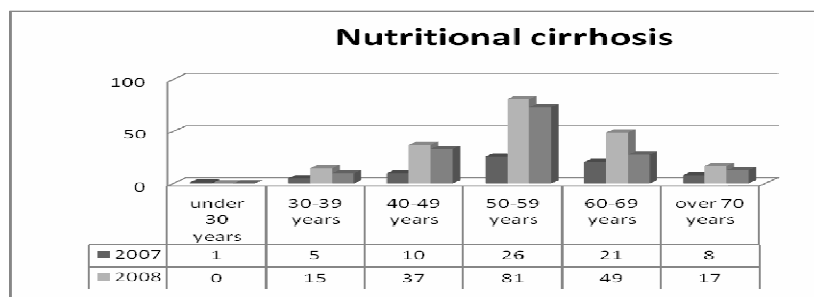


Fig. 5 – Distribution of patients with nutritional cirrhosis, hospitalized in the County Clinical Hospital of Oradea, by age groups, in 2007-2009

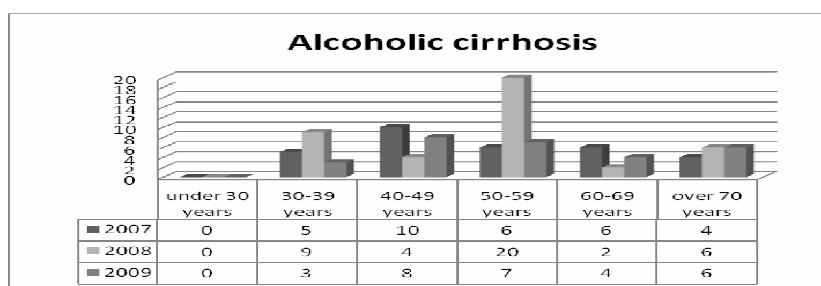


Fig. 6 – Distribution of patients with alcoholic cirrhosis, hospitalized in the County Clinical Hospital of Oradea, by age groups, in the period 2007-2009

Table 2

Associated pathology	2007		2008		2009	
	Nutritional	alcoholic	Nutritional	alcoholic	Nutritional	alcoholic
Diabetes mellitus	13	5	28	6	16	2
Hypertension	10	4	32	5	17	3
CRF	1	2	2	0	1	0
Tumors	7	2	19	5	14	3
Cardiac diseases	13	8	39	7	17	5
Gastric ulcer	2	0	10	0	2	0
Duodenal ulcer	1	0	1	0	1	0

Distribution of patients with cirrhosis hospitalized in the County Clinical Hospital of Oradea, depending on the associated pathology, in the period 2007-2009

Most hospitalized patients (98.77%) had various diseases associated with cirrhosis (an average of 3 diseases/each patient). The most common associated diseases were diabetes mellitus (23.10%), hypertension (HBP) (23.10%), chronic renal failure (CRF) (1.9%), tumors of various etiologies (16.50%) heart disease (29.37%), gastric ulcer (4.62%), duodenal ulcer (0.99%). From the analysis above we can see that liver cirrhosis is one of the most common liver diseases, which can be particularly identified in the male population. Alcoholic etiology is prevalent at young ages, so it is necessary to take preventive measures, such as making people aware of the role of alcohol as a risk factor in producing liver cirrhosis.

CONCLUSIONS

Liver cirrhosis is one of the most serious public health problems, the number of cases having increased in recent years, as the population's lifestyle has changed (toxic factors, unhealthy food, alcohol abuse).

The analysis performed indicates the fact that patients with cirrhosis represent 49.25% of all patients hospitalized with chronic liver diseases, nutritional and clinical forms representing 91.49%. Patients with alcoholic cirrhosis represent 17.36% of all hospitalized patients with liver cirrhosis. 77.22% are male, and in terms of clinical forms, both in nutritional and alcoholic cirrhosis, the masculine sex predominates - 77.04%, 78.0% respectively. Most patients come from urban areas, approximately 59.96% of all hospitalized patients. 40.41% of the patients taken into consideration for the purpose of this study were between the ages of 50-59 years, nutritional cirrhosis being predominant in people over 50 years (74% of hospitalized patients), while alcoholic cirrhosis proved to be predominant at ages between 30 and 50 years (72% of hospitalized patients).

Complementing the analysis with the study of other epidemiological indicators, in relation to the diagnostic and therapeutic means available in the Bihor county, we might be able to obtain a local model that will allow us to adapt the network of specific medical assistance to current needs, that could then be adapted and expanded to other counties, or even nationwide.

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