Research Article

A STUDY TO ASSESS THE HRQL AND BIOCHEMICAL CHANGES AMONG PATIENTS WITH ALCOHOLIC LIVER CIRRHOSIS

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A R T I C L E   I N F O

A B S T R A C T

Introduction: cirrhosis of liver disease is degenerative disease of liver the most common causes were alcohol, this study was done among patient with alcohol liver cirrhosis analysed their HRQL and biochemical variable changes such as SGOT and SGPT.

Objective of the study: To assess the health related quality of life and biochemical changes among patients alcoholic liver cirrhosis

Methods: research design was adopted for this study wad descriptive research design, sample size of 50 admitted in medical ward of K. C. G general Hospital, Bangalore. The sampling technique was used Convenience sampling technique. The tool were used section - A demographic Performa of the patient, section –B HRQL measured by using the chronic liver disease questionnaire and Section -C biochemical variables observed by using check list. Data was analyzed by using Descriptive and inferential statistics.

Results: The sample 50 was assessed their HRQL and Biochemical variables, in HRQL majority of the patients were had moderate HRQL 28 (56%), and 22 (44%) were had low HRQL. regarding the biochemical variables the mean of SGOT level were 115.32 ± 40.34, SGPT level were 58.98 ± 21.14, out of 50 patients SGOT level 2 normal and SGPT values 8 patients were normal it shows that the patient were in advanced stage of and severe vitamin B deficit.

Conclusion: The study concluded that majority of the patient had moderate HRQL and Non of the subject had high HRQL whereas in biochemical changes SGOT / SGPT ratio were 2:1 level were SGOT levels were twice higher than SGPT values. Few of patients in advanced stage disease and patient Vitamin B_6 deficit biochemical (SGOT, SGPT) variables shows look like normal.

INTRODUCTION

Liver diseases and cirrhosis contribute to 23.59% of mortality in world and ranks 27th as major cause of death in world and it is 2.74% of all the causes of death in India [1] Cirrhosis is defined by the World Health Organization (WHO) as a diffuse process characterized by fibrosis and the conversion of normal liver architecture into structurally abnormal nodules. In cirrhosis, normal liver is replaced by fibrotic tissue and regenerative nodules leading to progressive loss of liver function.[2] Cirrhosis is an important cause of mortality and morbidity.[3] The leading causes for cirrhosis liver are Alcohol intake

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Alcoholism is condition resulting from excess drinking of beverages that contain alcohol. The major health risk of alcoholism includes liver disease, heart disease, pancreatitis, central nervous system disorders and certain forms of cancer.[4] Health-related Quality Of Life (HRQL) is often regarded in terms of how QOL is adversely affected by debilitating chronic disease processes. Quality of Life Research Unit define QOL as "the degree to which a person enjoys the important possibilities of his or her life." While QOL has long been an explicit or implicit policy goal, an adequate definition and an accurate measurement tool have been elusive.[5]

According to the report in India around 10 lakh patients of liver cirrhosis were newly diagnosed every year in India. The liver disease is the tenth common causes of death in India as per the WHO, liver disease may affect every one in 5 Indian.

Liver cirrhosis is the 14th leading cause of deaths in world and could be the 12th leading cause of death in the world by 2020. [6]

Aim of the study

To assess the HRQL and biochemical changes among patients with alcoholic liver cirrhosis

MATERIAL AND METHODS

Setting

The study was conducted in KCG Hospital Bangalore.

Population

The target population of the study was comprised of all patients with alcoholic liver cirrhosis admitted in Hospitals Bangalore.

Criteria for sample selection

Inclusion criteria

Study includes

1. Male patients age between 41 to 65 years.
2. Patient diagnosed as cirrhosis of liver and admitted in selected hospital
3. Patient who speak Kannada or English.
4. Alcohol related liver cirrhosis
5. Willing to participate in this study

Exclusion criteria

Study excludes

1. Subjects with active disease such as cancer ,CAD
2. Patients with cardiac cirrhosis.
3. Chronic viral infections (Hepatitis B , C and D)

Sampling technique

Patients who fulfill the inclusion and exclusion criteria during the period of study. Non probability Convenience sampling technique.

Description of the tool

The tool consists of following sections.

Section A

Demographic details consist of items on age, , education, occupation, income, and alcoholic history such as age onset of drinking , years of drinking habit

Section B

Health related quality of life was assessed by using chronic liver disease questionnaire among patients with alcohol liver cirrhosis . Developed by Dr.Zobair M Younossi MD, MPH, FACG, FAP,AGAF. Chairman, Department of medicine , Inova Fairfax Hospital

The tool consist of 29 questionnaires under six domain and seven point score were allotted as follows

1=All of the time ,2= Most of the time, 3= A good bit of the time, 4 =Some of the time ,5= A little of the time, 6= Hardly any of the time, 7= None of the time

Scoring and interpretation of tool

S.No	Scoring	Level of HRQL
1	Below 101 (below 50%)	Low HRQL
2	102-151 (51- 75%)	Moderate HRQL
3	Above 152 (Above 75%)	High HRQL
Total score- 203		

Section C

Biochemical variables such as SGOT (AST), SGPT (ALT) values were taken from the patient report

RESULTS

Table 1 Description of background variables among patient with alcohol liver cirrhosis

n=50

S.No	Demographic variables	Frequency	Percentage
1.	**Age in years**		
	a.41 to 45	8	16
	b.46 to 50	17	34
	c.51to 55	18	36
	d. 56 and above	7	14
2.	**Educational qualification**		
	a. No formal education	0	0
	b. Primary school	10	20
	c. High school	25	50
	d. Higher secondary	13	26
	e. Under graduate	2	4
	f. Post graduate	0	0
3	**Occupation status**		
	a. Government employee	6	12
	b. Private employee	4	8
	c. Daily wage	18	36
	d. Business man	20	40
	e. Unemployed	2	4
4	**Monthly income of the family**		
	a. Rs.<5000	0	0
	b. Rs.5001-10000	2	4
	c. Rs.10001-15000	17	34
	d. Rs.>15000	31	62
5.	**Locality**		
	a. Rural	0	0
	b. Urban	40	80
	c. Semi urban	10	20

Table 2 shows frequency and percentage distribution of drinking history among patient with alcohol liver cirrhosis

n=50

6.A	**Age at onset of drinking**		
	a)less than 20 years	25	50
	b)21-30 years	22	44
	c)31-40 years	1	2
	d) Above 40 years	0	0
6.B	**Years of drinking habit**		
	a) Less than 10 years	1	2
	b) 11-15 years	23	46
	c) 16 -20 years	20	40
	d) Above 20 years	6	12
6.C	**Family history of drinking habit**		
	a) Yes	15	30
	b) No	35	70

Table 3 shows max score, range, Mean score, SD regarding health related quality of life among patients with alcohol liver cirrhosis

n=50

Domain	Max score	Range	Mean	SD
Abdominal symptoms	21	9-16	13.48	2.12
Fatigue	35	14-23	18.98	2.91
Systemic symptoms	35	14-22	18.72	2.59
Activity	21	8-11	9.48	1.09
Emotional function	56	24-33	27.24	2.78
Worry	35	16-20	18.86	1.60
Overall score	203	85-120	106.76	10.39

Table 4 Level of health related quality of life among patients with alcohol liver cirrhosis

n=50

S.No	Level of HRQL	Frequency	Percentage
1	Low level Of HRQL	22	44
2	Moderate level of HRQL	28	56
3	High level of HRQL	0	0

Table 5 shows biochemical variables (SGOT, SGPT) Mean, SD among patients with alcohol liver cirrhosis

n=50

S.No	Domain	Mean	SD
1	SGOT	115.32	40.34
2	SGPT	58.98	21.14

DISCUSSION

With regarding the demographic variables of patient with alcohol liver cirrhosis with regards Age majority 18(36%) patients between 51-55 years, with respect to education qualification majority 25(50%) patients had high school education, regarding occupational status most of 20 (40%) had business man, Monthly income of the family majority 31(62%) had income Rs> 15000, with locality 40(80%) were living in urban.

With respects to drinking history age at onset of drinking majority of subjects 25 (50%) had less than 20 years, years of drinking habit most of 23(46%) patients were drinking 11-15 years and family history 35(70%) had no family history of drinking.

Health related quality of life among patients with alcohol liver disease overall score 106.76 ± 10.39, majority of the subjects had 28(56%) moderate level HRQL, 22(44%) subjects had low level of HRQL and non of the subjects had high HRQL.

Similar study was conducted (Giulio Marchesini *et al*.) Factors Associated With Poor Health-Related Quality of Life of Patients With Cirrhosis in Germany. The sample size were 544 by using simple random sampling technique, the tool were used Short FormÐ36 and Nottingham Health Profile questionnaires. The study concluded that Quality of life is variably impaired in cirrhosis, also in uncomplicated patients. Non life-threatening symptoms, such as muscle cramps, are of major concern. These data are the basis for longitudinal studies measuring the effects of therapy and procedures on patient-derived health outcomes.[7]

Biochemical changes 50 patients blood values were analysed SGOT level 96%, SGPT 84% were elevated. The SGOT / SGPT ratio were found 2:1. The SGOT values were twice higher than the SGPT values it signify the patient alcohol liver cirrhosis had damage of not liver other organ also like heart muscle and kidney . Study shows in severe vitamin B12, B6 deficiency and advanced stage of liver diseases (Decompensated liver disease) biochemical values shows normal. Similar study was conducted (Vijin Joseph, C P Abdul Rahma) Analysis of biochemical markers in alcoholic liver cirrhosis Mangalore, Karnataka, India.

The sample of size were 40. The parameters in the study included serum Alanine Aminotranferase (ALT), Asparatate Aminotransferase (AST), Gamma Glutamyl Transfers (GGT) Total Bilirubin, and Protheombin. The study results were shown AST/ ALT ratio was more than 2:1 IN 75 % of the study subjects, serum albumin was less than 2.5in 83.7% and GGT was elevated than normal in 67,5% Total bilirubin elevated 1.2 in 77.5% and PT –INR values more than 1.5 was noted in 72.5%. The study concluded that the laboratory values were predicting the advancement of early alcoholic liver cirrhosis or liver disease and end stage liver disease. [8]

CONCLUSION

The result of the current study confirmed that patient with alcoholic liver cirrhosis had negative impact or moderate and low Health related quality of life. Biochemical variables were elevated higher than normal, SGOT/ SGPT ratio 2:1. The study recommend that the patient with alcoholic liver cirrhosis diseases need counselling, education and self management programme to change positive impact of patient quality of life

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