A Study on Assessment of Demographic Details and Health Related Quality of Life in Alcoholic Liver Disorder Patients

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Abstract

Objective: To study the impact of Patient Education on Health-related Quality of Life in patients with Alcoholic Liver Disorders.

- To assess the demographic details that could increase the likelihood of disease progression.
- A randomized control study is implied to assess the health-related quality of life and to lower the incidence of risk factors and complications.

Methods: This is a prospective, observational study carried out in a multi-specialty hospital for a period of 6 months. Patients between age group of 18 years and 70 years of either gender from in-patient and out-patient departments are included in the study. Demographic data, lab parameters and treatment details were collected from the patient case files. Health related quality of life was assessed using standardized questionnaire called 5D questionnaire. It is provided with scale numbered from 0-100, by which HRQOL score can be assessed.

Results: Among the 60 study patients, 30 patients were from control group and 30 patients were from test group. In the control group, 27 patients (95%) were male and 3 (5%) were female. In the test group, 29 patients were males (98%) and 1(2%) was female. The mean age of the study patients was 20 years and maximum age of the enrolled patients was 75 years. Majority of the patients were in the age group of 40-50. Among the patients completed all the follow-ups, most of them have completed their schooling education (59%) and were employed. Smoking status in the control group patients was (53%) and the test group was (66%).

Conclusion: Alcohol liver disorder affects social and mental well-being of the patients associated with dramatically impaired HRQOL. From the finding of our study it can be

concluded that structured education to patients in test group by pharmacist shown a significant improvement in 5D-5L questionnaire and overall Health Related Quality of Life. Supporting the educational interventional role of pharmacist.

Keywords: *Alcoholic Liver Disorder, Health Related Quality of Life*.

Introduction

Alcoholic liver disease occurs due to overconsumption of alcohol which worsens the liver functions and decreases its productivity. Regular daily consumption of alcohol may lead to various clinical situations such as steatosis, cirrhosis of liver (Robert O'Shea *et al*., 2009).

Epidemiology

The major medical complication of alcohol abuse is Alcohol Liver Disease. In the western world, the major cause of liver cirrhosis was alcohol. In the developing countries, Schistomial infection being caused the portal HTN. Alcohol accounts for 80% of liver cirrhosis cases in general hospital of UK. Alcoholic cirrhosis is increasingly seen in countries such as Japan, India which had a low prevalence of the disease. Around the world, the Patterns of alcohol intake are constantly evolving and have a greater incidence and prevalence of ALD. The highest consumption of alcohol per adult was reported in Europe, mainly in Russia and its surrounding countries, and the least consumption of alcohol reported mostly in Islamic regions of the eastern Mediterranean and the less developed region of Southeast Asia, predominantly India. In various countries Alcohol consumption leads to cirrhosis had a direct correlation to mortality rates per capita change annually. A Canadian study confirmed that both in men and women (Yuji Kondo *et al*., 2007) per capita alcohol consumption is closely related to mortality rates from alcoholic.

In the United States the third leading preventable cause of death is Excessive consumption of alcohol. Its estimated 3.8% mortality rate globally due to alcohol consumption. Among alcoholics there are various causes of deaths. As a significant cause of mortality was liver disease. In the year 2003, all deaths from liver disease was count as 44% this were attributed to alcohol, while approximately 10%-15% of U.S. in the U.S (Yuji Kondo *et al*., 2007). Complications of ALD-ascites, variceal hemorrhage or portosystemic encephalopathy, hepatic encephalopathy, hepatitis, spleenomegaly, hepatomegaly, jaundice, steatohepatitis, amoebic liver abscess, bacterial peritonitis, liver cancer. Other complications such as renal failure, osteoporosis, cardiovascular complications and factors that can affect the development of liver injury include the dose, duration and type of alcohol consumed, drinking habits, gender,

ethnicity, and risk factors such as obesity, iron overload, concurrent viral hepatitis infection, and hereditary variables.

The effective interventions that include the management of Hepato-Renal syndrome, Gastrointestinal bleeding, spontaneous bacterial peritonitis, hepatic encephalopathy (HE) and hepatocellular carcinoma were used to prognosis of cirrhosis Improved.

Treatment Guidelines in Treating ALD

Based on the stage of the disease and the specific aims of treatment the Therapy of ALD is used. various therapeutic guidelines are practiced to improve HRQOL and to bring positive outcomes of therapy (Yuji Kondo *et al*., 2007). For patients with ALD to improve the outcome and histological features of hepatic injury, to reduce portal pressure and decrease progression to cirrhosis, and to improve survival at all stages in patients with ALD, Abstinence is the most important therapeutic intervention. However, compared to males this may be less likely to occur in female patients. After abstinence at any time Recidivism is a major risk factor in all patients. Depending on the time course of follow-up and the definition of recidivism (e.g., any alcohol consumption, vs. moderate-to-harmful drinking), its Estimation vary, and relapse rates range from 67 % to 81% over the course of 1 year is occurred. Benefit in achieving and maintaining abstinence with the use of baclofen, a gamma amino butyric acid B receptor agonist, randomized clinical trial in patients with cirrhosis was suggested.

Nutritional therapy

The prevalence of severe protein-calorie malnutrition, as well as deficits in a variety of vitamins and trace minerals, such as vitamins A, D, thiamine, folate, pyridoxine, and zinc, is a typical finding among alcoholics. The researchers were motivated by a variety of clinical experiments including anabolic steroids, nutritional supplements, and vigorous enteral feeding.

Steroids

The use of steroids, is the most extensively studied intervention in AH. Although in the clinical trials the doses and durations of steroid treatment used were variable, in favor of prednisone, the best suggests a dose of prednisolone (40 mg / day for 4 weeks, then tapered over 2 – 4 weeks, or stopped, depending on the clinical situation) should be used.

There are several additional treatment approaches. Trials using anti-oxidants (vitamin E, silymarin, combination anti-oxidants), anti-fibrotics (colchicine), and anti-thyroid medications were conducted to study AH, but no compelling benefit was seen (PTU). Several studies have tested other aggressive interventions in patients with AH, such as a molecular adsorbent recirculating system, in addition to medical treatment directed at the underlying

pathophysiological abnormalities. While the results of early studies were encouraging, with better than predicted outcomes in treated patients, a subsequent case series was less promising. After failing to make significant progress on steroids, Patients with severe AH who were treated with leukocytapharesis have also had good results, according to case reports. These data are encouraging, but recommendations for how they should be used must wait for the results of comparative investigations of these individuals' outcomes (Fen-Gao *et al*., 2007).

Scales Used in Assessing ALD Worldwide

Various scales are used to assess the risk of liver disease and to improve HRQOL (Neila Paul *et al*., 2011). There are various scales each with its use, based upon the etiology of the disease and its format of counselling the patients. Some of them are

- CAGE (Cut-down, Annoyed, Guilty, Eye Opener)
- AUDIT (Alcohol use Disorder Identification Test)
- MELD (Model for End Liver Disease)
- EQ-5D Questionnaire (Five Dimension Questionnaire)
- CLDQ (Chronic Liver Disease Questionnaire)
- HUI (Health Utility Index)

Glasgow Alcoholic Hepatitis Score

Biochemical tests have been considered to be less sensitive than questionnaires in screening for alcohol abuse, but are useful in identifying relapse. Various questionnaires have been used to detect alcohol dependence or abuse. A structured interview, using instruments such as the Lifetime Drinking History, is often used as a gold standard for quantifying lifetime alcohol consumption. The CAGE questionnaire is to identify hospitalized in patients with alcohol problems, and remains among the most widely used screening instruments. It has been faulted, however, on several measures - it focuses on the consequences of alcohol consumption rather than on the amount of actual drinking - it is short (four questions), simple (yes / no answers), and can be incorporated into the clinical history or self-administered as a written document.

The WHO created the Alcohol Use Disorders Identification Test, a 10-item questionnaire that focuses on identifying heavy drinkers while avoiding ethnic and cultural prejudice. Its sensitivity and specificity are greater than those of shorter screening devices (with sensitivity ranging from 51 to 97 percent, and specificity from 78 to 96 percent in primary care). It includes both current and lifetime drinking time spans. Amongst the generic instruments, the most relevant and widely used scales is SF-36 (short form-36) questionnaire that split 8 sections with

36 items which covers both the mental and physical conditions. Baseline score shown the degree of liver dysfunction that will be evaluated, measured using child pugh score and MELD score indicating higher the score, greater the liver dysfunction.

HRQOL (health related quality of life)

Over the last few decades, assessing quality of life (QOL) of individuals with diseases has become common clinical practice as a consequence of increased survival of patients with chronic diseases. The term health-related quality of life (HRQOL) reflects the impact of the disease upon a person's quality of life. It is a subjective, multidimensional concept addressing various aspects of the individuals (Robert O'Shea *et al*., 2009) life such as age, gender, socioeconomic status, and type of illness, and treatment that should be considered during patient evaluation (JK *et al*., 2006). The health-related quality of life (HRQOL) studies compare test (JK *et al*., 2006) and control groups of patients and provide and overall view of the wellbeing of patients, specific, somatic and cognitive symptoms that could not be recorded by generic scales. With an inability to cure the primary disease process, it becomes important to prevent further exacerbation and optimize the length of time between hepatitis imperative to prevent the complications like hepatitis and cirrhosis. Patients with mild cirrhosis may survive for 10 to 15 years before liver transplantation (James G.Orr *et al*., 2014). Proper preventive measures can maximize this time. This study will discuss the various strategies that are proven to be effective and have scientific evidence to prevent the complications of alcoholic liver disease. Randomized-controlled trials have shown that vaccination against hepatitis A and B, screening of hepatocellular carcinoma, prophylaxis of variceal hemorrhage and spontaneous bacterial peritonitis, have reduced the complications associated with alcoholic liver disease (A. Sanyal *et al*., 2011).

Need for The Study

- Pharmacists as health providers have shown a significant improvement in health outcomes through advocacy.
- The study is designed to provide education to the patients by creating awareness about the disease and ensuring people to reduce and stop consumption of alcohol.

Aims and Objective

- To study the impact of patient education on health related quality of life in patients with Alcoholic liver disorders.
- To assess the demographic details that could increase the likelihood of disease progression.

- A randomized control study is implied to assess the health related quality of life and to lower the incidence of risk factors and complications.

Materials and Methods

Study Design

- The study is prospective, observational study.

Source of Data and Materials

- Patient Consent Form.
- Patient Data Collection Form.
- Patient Questionnaire.
- Patient Educational Leaflet.

Inclusion Criteria

- Inpatients and Outpatients of Internal Medicine department diagnosed with ALD and other Comorbid conditions.

Exclusion Criteria

- Patients who are not willing to give consent.

Method of Data Collection

- Case Sheet.
- Patient Questionnaire / Interview.

Study Procedure

This is a prospective observational study where patients eligible is enrolled in the study after obtaining the consent. A data collection form and a questionnaire will be prepared and used. This form mainly contains the demographic details of the patient and medication chart. Along with this, a leaflet is prepared to educate the patient regarding the outcomes of this disease. The study will be conducted at MEDICOVER hospital. All information relevant to the study will be collected at the time of admission until the date of discharge and the data will be analysed using a suitable method for statistical analysis.

Result

Table 1: Distribution of the study population on the basis of gender

Gender	Control	Test
Male	27	29
Female	3	1

Table 2: Distribution of the study population on the basis of age

Age Group	Control	Test
20-30 years	6	2
31-40 years	6	4
41-50 years	13	9
51-60 years	1	9
61-70 years	2	3
> 71 years	4	3

Table 3: Distribution of cases based on their department

Department	Control	Test
AMC	17	22
GM	13	8

Table 4: Distribution of cases based on the level of education of the patient

Level of Education	Control	Test
Primary	15	15
Secondary	4	2
None	11	2

Table 5: Distribution of cases based on their employment

Employment	Control	Test
Employed	16	16
Un-employed	14	13
Retired	0	1

Table 6: Cases distribution based on the marital status of the patient

Marital Status	Control	Test
Married	29	29
Unmarried	1	1

Table 7: Disposition of the cases based on the Alcohol Intake by the patients

Alcohol Intake	Control	Test
Alcoholic	30	28
Non-Alcoholic	0	1
Social Alcoholic	0	1

Table 8: Distribution of the study population on the basis of occurrence of Alcoholic Disease

Alcoholic Disease	Control	Test
0-5 years	14	10
6-10 years	11	14
11-15 years	4	2
16 and above	1	3

Table 9: Distribution of cases based on the dietary habits of the patient

Dietary Habits	Control	Test
Vegetarian	3	6
Non-Vegetarian	27	24

Table 10: Distribution of cases based on the smoking habits of the patient

Dietary Habits	Control	Test
Smoker	16	20
Non-Smoker	14	10

Table 11: Distribution of cases based on the number of medications received by the patients

Medication	Control	Test
4	1	0
5	12	17
6	9	6
7	8	6

Table 12: Distribution of cases pertaining to the past alcoholic history of the patient

Family History	Control	Test
0-5 years	14	9
6-10 years	11	14
11-20 years	4	5
21 & above	0	2

Discussion

This study highlights the improved Health Related Quality of Life (HRQOL) using 5D-quesstionnaire to assess Health Utility Index (HUI) of patients who are suffering from Alcoholic Liver disorders in Acute Medical Care (AMC) and general Medicine (GM) ward of Medicover hospital, secretariate. In the present study, it is observed that improved HRQOL in ALD patients was found to be 80%. For checking health domains, a multi-dimensional concept that are related to emotional, mental, physical and social functioning we used HRQOL study. The targets symptomatic improvement with suitable outcome measures should be done by evaluation of novel therapies. In this study, which are known to contribute to impaired HRQOL in advanced liver diseases, we provide an overview and discussion of factors of HRQOL in alcoholic liver disease. This prospective randomized control study shows that, 11 in 30 patients of test group have low HRQOL scores (36%) followed by 18 of 30 patients were under average HRQOL scores (60%) at the baseline. These scores are relatively low due to the factors like alcohol intake, co-morbidities, smoking status, past medical history. This study shows that

severe liver disorders are associated with a higher level of anxiety, altered sensorium. At the first follow-up 13 of 30 patients had shown the HRQOL scores between 40-60 and 16 patients' shown HRQOL scores between 60-80. At the final follow-up, 16 out of 30 patients had shown HRQOL scores between 50-70 and remaining 24 patients had shown HRQOL scores between 70-90. A significant improvement of HRQOL were seen through this study in majority of the patients, especially in terms of self-care, mobility, anxiety/depression and pain/discomfort. On better medical intervention these aspects have significant impact not only in terms of improving HRQOL but even in enhancing the pharmaceutical care in patients with ALD. A prospective cohort study conducted by Maja Theile *et al.,* shown that five cirrhosis out patients out of 5 had a low health and quality of life. The high proportion of patients without signs of hepatic decompensation was surprisingly finds through this study. Both poor HRQOL and mortality are predicted the severity of the underlying liver disease. Low albumin and presence of ascites, the BMI was a predictor of HRQOL used to estimate the nutritional status. With a low BMI, the patients were more prone to have a low HRQOL. The main limitation of this study is, it have a very small sample size, it may explain only why the Child-Pugh score, non- alcoholic etiology, and BMI were the only predictors of quality of life. However, the Child-Pugh score is associated with the quality of life concur with studies results. The presence of ascites and albumin level is a independent of the severity of the underlying liver disease that.is association between a low BMI and a low quality of life score. Overall nutritional status of cirrhotic patients may suggest that they may improve their quality of life. Accordingly, the HRQOL studies on patients with cirrhosis a branched chain amino acids and late evening nutritional supplements have found a beneficial effect which resulted in minor weight gains. With all types of liver disease, the CLDQ is validated and developed in cohorts of patient's study. Patients with non-alcoholic etiologies of liver disease had significantly lower HRQOL than patients with alcoholic cirrhosis3 were founds in this study. Our study has a similar finding in terms of HRQOL improvement like of the previous study conducted by Maja Theile et al which shows a beneficial effect on HRQOL scores alongside BMI and albumin levels, while our study findings recruit the levels of LFT, Hb (hemoglobin).

Conclusion

- Alcohol liver disorder affects social and mental well-being of the patients associated with dramatically impaired HRQOL. To improve the encephalopathy and ascites manifestations in properly designed longitudinal studies by using appropriate HRQOL outcome measures a systematic intervention is needed.

- From the finding of our study, it can be concluded that structured education to patients in test group by pharmacist shown a significant improvement in 5D-5L questionnaire. Supporting the educational interventional role of pharmacist.

Acknowledgement

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