



Original Article

Knowledge and Attitude Towards Decompensated Liver Disease Patients Assessment Amongst Health Care Providers of a Tertiary Care Hospital- A Cross Sectional Study

Bilal Saeed, Arshad Hayat, Asma Asghar, Usama Ashfaq, Wasif Anwar, Sana Izhar

Combined Military Hospital Peshawar

Abstract

Objective: To assess the knowledge and attitude of healthcare workers towards assessment of decompensated liver disease patients.

Methods: This cross-sectional observational study was conducted in the Department of Gastroenterology, Combined Military Hospital Peshawar from September 2023 to November 2023. Non-probability consecutive sampling technique was used and included. All the patient's fulfilling inclusion and exclusion criteria were observed during the study period. A preformed excel sheet was used to collect data including age, gender, education level, occupation, duration of illness, duration of treatment, etiology, medications. Patients of both genders from ages 18-84 years with known decompensated chronic liver disease admitted indoor or visited outpatient department during the study period. Frequency and percentages were calculated for quantitative variables and mean $\pm$ SD. P-value of <0.05 was considered statistically significant.

Results: Mean age of the patients was 53.16 ($\pm$ 12.70) years. Out of 95 patients, 30 (32.70%) were females while 65 (67.30%) were males. Mean duration of Chronic Liver Disease was 5.15 ($\pm$ 1.85) months. Child Pugh scoring was performed for 26 (27.40%) patients only. 29(90%) of the doctors had knowledge of assessing DCLD patients by using Child Pugh score, 5(15%) were used to calculate CPT score while assessing DCLD patients. Regarding medication, 78% were prescribing inappropriate drugs without any assessment and indications of drugs i.e. rifixamine, beta blockers, proton pump inhibitors, lactulose, antibiotics, ulsanic acid, furosemide, and spironolactone. Frequency of more than 5 drugs prescription was 80%.

Conclusion: Careful assessment and managing decompensated liver disease patients not only slows down the disease progression but can also decrease morbidity and mortality related to decompensated liver disease.

Keywords: Attitude, knowledge, liver disease, health care workers

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Corresponding Author: Dr. Bilal Saeed

Email: ayubian2019@gmail.com

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Introduction

Liver diseases are the world's leading cause of mortality and morbidity approximating 2 million deaths each year recorded worldwide.¹ Pakistan shares the highest burden of CLD being the second highest carrier of Hep C i.e., 5% of Pakistan's population is carrier.² CLD is a manifestation of chronic injurious exposures leading to histological reversible and irreversible changes in liver architecture which over time manifest as clinical picture of compensated or decompensated CLD.

Clinical manifestation depends on the stage of the disease and ranges from jaundice, anemia, lethargy, vomiting, palmer erythema, Dupuytren's-contracture to more severe clinical presentation of hematemesis, varices, ascites or carcinoma.³

The most important causes of CLD include alcohol (leading cause), Nonalcoholic fatty liver disease (second most important etiology for liver cirrhosis and transplantation)¹, Hep B and C, Autoimmune causes and Genetic susceptibility⁴ and in Pakistan, Hep B and Hep C are the

major contributors of CLD burden i.e., cumulative prevalence of 7.6% which accounts for nearly 13 million cases who are chronic carriers. It is also worth mentioning that 20 % of HBsAg and 80% of Anti HCV positive patients will progress to CLD later in life.⁵

Due to a significant burden of CLD in Pakistan- a resource stretched country, it is of great importance that the health care works have firm knowledge of the screening, management and prevention of CLD either to curb it at the initial stages or to halt its progress to DCLD which is possible only by having complete knowledge on the various factors that cause chronic hepatic injury specially those which are reversible like alcohol overuse, drugs, hyperlipidemias.³ Recognizing signs and symptoms of CLD at both its initial and later stages, screening and diagnostic techniques available like Serum markers ALT, AST, ALP, Albumin levels and multiple noninvasive fibrosis score like AST-to-ALT ratio (AAR), fibrosis-4 (FIB-4) fibro-test, NAFLD fibrosis score (NFS) or AST-to-platelet ratio index (APRI), which quantify liver fibrosis as per its stage and for the prognosis and evaluation of acute liver status scores like Child-Pugh Score (CPS) are an essential and necessary tool for physicians dealing with DCLD patients.⁶ Model of End-Stage Liver Disease (MELD), Albumin-Bilirubin (ALBI) Score and lastly interpretation of Ultrasound finding which are more than 90% sensitive and specific when it comes to evaluation of cirrhosis and decompensated liver disease⁷, the management of DCLD patients with the appropriate drug regimens⁸ and early recognition of the complication of a CLD patient is very important.⁹

The aim of this study was to assess the general attitude and knowledge of health care providers including doctors and nurses towards DCLD patients as a study previously done on general population showed a dire need for public education.¹⁰ As primary health care providers are a major source of public education, this study may quantify the need for a deeper understanding of the disease along with its etiologies providing a roadmap towards a future approach of our health care providers towards DCLD management, prevention and screening.

Methods

This cross-sectional observational study was conducted at Gastroenterology department of CMH Peshawar

from 1st September to November 2023. A sample size of 28 was calculated using Open Epi online software keeping reference prevalence for cirrhosis in Chronic liver disease to be 1.8%¹¹, confidence interval was 95% and power of test to be 80.

Non-probability consecutive sampling technique was used and included all the patient's fulfilling inclusion and exclusion criteria during the study period. A preformed excel sheet was used to collect data including age, gender, education level, occupation, duration of illness, duration of medicine, etiology, medications. Patients of both genders from 18-85 years known case of decompensated chronic liver disease admitted indoor or visited outpatient department during the study period. Patients of peptic ulcer, hepatic encephalopathy, and ischemic heart disease, admitted in critical care unit were excluded. Frequency and percentages were calculated for quantitative variables and mean $\pm$ SD. P-value of < 0.05 was considered statistically significant.

Table 1: Knowledge and attitude of doctors

CPT score assessment on admission	Frequency %
Yes	27%
No	73%
Poly-pharmacy	Frequency %
<5 drugs	15
>5 drugs	80

Results

Mean age of the patients was 53.16 ($\pm$ 12.70) years. Out of 95 patients, 30 (32.70%) were females while 65 (67.30%) were males. Mean duration of Chronic Liver Disease was 5.15 ($\pm$ 1.85) months.

As shown in table 1 above, in 27% DCLD patients CPT score was calculated on admission while 73% of our cohort was admitted without calculating CPT score. In 80 patients, more than five inappropriate drugs were prescribed while in the case of 15 patients less than five inappropriate drugs were given.

Table 2 shows the association of inappropriate drug prescription and CPT score calculation by the residents at the time of admission of our patients.

Discussion

Burden of Chronic liver disease in Pakistan is on the rise

Table 2: Association between inappropriate drugs prescription and CPT score:

Child Pugh Scoring	Beta Blockers		Proton Pump Inhibitors		Rifaxamine		Lactulose		Opioid		Spironolactone	
	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No
Yes	16 (16.8)	10 (10.5)	20 (21.1)	6 (6.30)	21 (22.1)	5 (5.3)	17 (17.9)	9 (9.50)	19 (20)	7 (7.40)	15 (15.80)	11 (11.60)
No	43 (45.3)	26 (27.3)	44 (46.3)	25 (26.3)	40 (42.1)	29 (30.5)	38 (40)	31 (32.6)	39 (41.1)	30 (31.6)	42 (44.20)	27 (28.40)

due to surging cases of Hep B and C which in a large chunk of population manifest as decompensated chronic liver disease or cirrhosis.¹¹ Under these circumstances, lack of knowledge and inappropriate use of medication to treat chronic liver disease adds fuel to the fire in a cash strapped country like ours. This study was conducted to assess the knowledge and attitude of the health care providers including doctors, nurses and residents of a tertiary care hospital of chronic liver disease on the lines of a similar study highlighting the use of medications and Child Pugh scoring system in assessment of a patient with liver disease.

Mean patient age was 53.16 and total number of patients were 95 with 33% males and 67% females with mean duration of disease 5.15 months. We found out that Child's scoring was performed for only 27% of the patients with 90% of the doctors knowing how to assess correctly but only 15% actually use this for admitted patients. Childs scoring is an important bedside assessment tool which focuses on factors like encephalopathy, INR, Ascites, Albumin and bilirubin and is divided into class A, B and C.¹² This score is a strong mortality predictor specially for surgery, dose guiding criteria for medication regime like anti-cancer drugs and liver transplantation. We found out that only 23 % of patients had their CPT calculated before admission.

Our study also found the prescription of drugs in 78% of the cases that are deemed inappropriate in the management of cirrhosis as the risk outweighs the benefit¹⁴ including rifaximin, PPI's, spironolactone, furosemide, B Blockers, Ulsanic acid and antibiotics that aggravate the disease owing to hepatocellular dysfunction leading to changes in pharmacodynamics and pharmacokinetics.¹⁵ These were found to be > 5 medications in 80 of our sample cases.

In table 2 we have devised a relationship between CPT and inappropriate medication use which shows that for Beta Blockers incidence was low as 16% when CPT was calculated as compared to 43% when CPT wasn't calculated. For PPIs it was 20% and 44% respectively. For rifaximin it was 21% and 40%. For Lactulose it was 17% and 38%. For Opioids it was 19% and 39% and for Spironolactone it was 15 % and 42% respectively depicting the pattern of outcomes when CPT is calculated, it affects the treatment regimen.

Conclusion

In our study we have shown the dire need for the education and updating the knowledge of health care providers on treatment practices to become parallel to the modern algorithms. The data from a tertiary care hospital of Pakistan seconds this while highlighting the importance of continuing medical education and with the results obtained, the extra burden of disease on the

country could be reduced.

Conflict of Interest: None

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References

1. Harshad Devarbhavi, Sumeet K. Asrani, Juan Pablo Arab, Yvonne Ayerki Nartey, Elisa Pose, Patrick S. Kamath, Global burden of liver disease. *J Hepatol.* 2023; 79(2):516-37.
2. Pakistan tackles high rates of hepatitis from many angles. [Updated July 11, 2017] Available from: [[https:// www. who. int/ news- room/ feature- stories/ detail/ pakistan- tackles- high- rates- of- hepatitis- from- many- angles](https://www.who.int/news-room/feature-stories/detail/pakistan-tackles-high-rates-of-hepatitis-from-many-angles)]
3. Sharma B, John S. Hepatic Cirrhosis. [Updated 2022 Oct 31]. In: StatPearls [Internet]. Treasure Island (FL): StatPearls Publishing; 2023 Jan
4. Raja AM, Ciociola E, Ahmad IN, Dar FS, Naqvi SMS, Moaeen-Ud-Din M, Kaukab Raja G, Romeo S, Mancina RM. Genetic Susceptibility to Chronic Liver Disease in Individuals from Pakistan. *Int J Mol Sci.* 2020; 21(10): 3558.
5. Qureshi H, Bile KM, Jooma R, Alam SE, Afridi HU. Prevalence of hepatitis B and C viral infections in Pakistan: findings of a national survey appealing for effective prevention and control measures. *East Mediterr Health J.* 2010; 16 (Suppl):S15-23.
6. Tsois A, Marlar CA. Use Of The Child Pugh Score In Liver Disease. [Updated 2023 Mar 13]. In: StatPearls [Internet]. Treasure Island (FL): StatPearls Publishing; 2023 Jan-. Available from: [<https://www.ncbi.nlm.nih.gov/books/NBK542308>]
7. Buechter M, Gerken G. Liver Function-How to Screen and to Diagnose: Insights from Personal Experiences, Controlled Clinical Studies and Future Perspectives. *J Pers Med.* 2022; 12(10):1657.
8. Cirrhosis: common medication for management of liver diseases. Available from: [[www.nbt.nhs.uk/ our- services/ a- z- services/ gastroenterology- hepatology/ gastroenterology- hepatology- patient- information/ cirrhosis](http://www.nbt.nhs.uk/our-services/a-z-services/gastroenterology-hepatology/gastroenterology-hepatology-patient-information/cirrhosis)]
9. Perez IC, Bolte FJ, Bigelow W, Dickson Z, Shah NL. Step by Step: Managing the Complications of Cirrhosis. *Hepat Med Evid Res.* 2021; 13(5):45-57.
10. Javed N, Nadeem MH, Ghazanfar H. Hepatitis B and C in Pakistan: A community survey. *Cureus.* 2019; 11 (10):e5992.
11. Zahoor S, Khan A, Asif S, Tabraiz SA, Mustafa H, Ansar S, Hanif S, Raza HA. Past and Future Perspectives for Hepatitis B and C in Pakistan. *Cureus.* 2021; 13(8): e 17521.
12. Tsois A, Marlar CA. Use of The Child Pugh Score In Liver Disease. [Updated 2023 Mar 13]. In: StatPearls [Internet]. Treasure Island (FL): StatPearls Publishing; 2023

13. Palmieri C, Macpherson IR. A review of the evidence base for utilizing Child-Pugh criteria for guiding dosing of anticancer drugs in patients with cancer and liver impairment. *ESMO Open*. 2021;6(3):100162.
14. Hayward KL, Weersink RA. Improving Medication-Related Outcomes in Chronic Liver Disease. *Hepatol Commun*. 2020;4(11):1562-77.
15. Weersink RA, Bouma M, Burger DM, Drenth JP, Harkes-Idzinga SF, Hunfeld NG, Metselaar HJ, Monster-Simons MH, Taxis K, Borgsteede SD. Evidence-based recommendations to improve the safe use of drugs in patients with liver cirrhosis. *Drug Safety*. 2018;41(6):603-13.