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Review Article

Reduction of Ascites and Paracentesis Frequency in Patients with Liver Cirrhosis

Randa A. Ali[1], Ali H. Shilib[2], Dr. Huda Sabah Al Jadiri[3*], Jawad K. Al-Diwan[4]

[1]MB CHB, FIBMS, MOH, Arabic Board for Health Specialization
[2]MB CHB, FIBMS, Babylon Health Directorate, Marjan Medical City, Majid Algebory Center for GIT and Liver
[3]MB CHB, FAHS, MOH, Arabic Board for Health Specialization
[4]MB CHB, MSc, DCN, FIBMS, FFPH, Department of Family and Community Medicine, College of Medicine, Baghdad University, Iraq

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Abstract: Diet therapy plays an important role in the treatment of liver diseases as a component for faster recovery of the liver and restoration of its normal function. This study was carried out to reduce ascites and paracentesis frequency needs by improving nutritional status. The ascitic patients were chosen from Gastroenterology Center in Babylon governorate that admitted for paracentesis (convenient sample). A diet regimen was given to the participants. The effect of this regimen on frequency of paracentesis, drained fluids' amount, liver enzymes, Total Serum Bilirubin, Blood Urea Nitrogen, Serum Albumin, and Prothrombin Time was tested by student's T test. There was a significant reduction in paracentesis frequency, Glutamic Pyruvic Transaminase, Total Serum Bilirubin, and Plasma Albumin ($p = 0.03$, $p = 0.03$, $p = 0.04$, and 0.03 respectively). In conclusion, diet regimen showed a positive change on improving cirrhotic liver patients.

Keywords: Liver cirrhosis, nutritional regimen, ascitic patients, liver disease.

INTRODUCTION

During last decades, Middle East witnessed a reduction in diarrheal diseases and rising rate in GIT cancer and cirrhosis. It is an obvious demographic change led to epidemiological transition [1]. Cirrhosis is a chronic liver disease characterized by ascites. Dietary treatment for ascites includes restricting dietary sodium and adequate protein intake to replace losses from frequent paracentesis [2]. Continuous supplementary Pro Source high protein and low carbohydrate therapeutic feeding may reduce the severity of ascites and the requirement for paracentesis [3]. This study was carried out to demonstrate the effects of dietary treatment on patient with liver cirrhosis.

The ascitic patients were chosen from Gastroenterology Center in Babylon governorate that admitted for paracentesis (convenient sample). A diet regimen was presented [4]. The effect of this regimen on frequency of paracentesis, drained fluids' amount, liver enzymes, Total Serum Bilirubin, Blood Urea Nitrogen, Serum Albumin, and Prothrombin Time was tested by student's T test. This is shown in table (1).

Table (1): Mean differences between variables before and after nutrition

Variables	Mean before	Mean after	P-value
Frequency of paracentesis	5.6 ± 1.5	3.8 ± 1.3	0.03
Amount of fluid drained	3.8 ± 1.3	3.3 ± 1.04	0.1
Glutamic Oxaloacetic Transaminase	55.5 ± 27.9	44.4 ± 18.9	0.1
Glutamic Pyruvic Transaminase	55.3 ± 24.8	44.5 ± 17.1	0.03
Alanine Phosphatase	236.3 ± 227.3	179 ± 158.3	0.06
Total Serum Bilirubin	32.4 ± 14.6	23 ± 11.4	0.04
Blood Urea Nitrogen (BUN)	22.2 ± 28.9	9.9 ± 5.8	0.2
Plasma Albumin	1.8 ± 0.6	2.4 ± 0.8	0.03
Prothrombin Time	21.13±5.81	17.88±7.62	0.1

***Corresponding Author:** Dr. Huda Sabah Al Jadiri
MB CHB, FAHS, MOH, Arabic Board for Health Specialization

The nutritional treatment (reduction in paracentesis frequency, drained fluid amount, Glutamic Oxaloacetic Transaminase, Glutamic Pyruvic Transaminase, Alanine Phosphatase, Total Serum Bilirubin, Blood Urea Nitrogen, Plasma Albumin and Prothrombin Time) showed a positive effect on patients' health. This finding is similar to that in literatures [2, 3, 5]. There were significant decreases in paracentesis frequency due to restricted fluids amount < 1.5 L / day and salt avoidance. A significant decrease in Glutamic Pyruvic Transaminase and Total Serum Bilirubin was noticed that might be explained by reduction in liver disease and liver damage induced by nutritional support. There was significant increase in Serum Albumin by replacing proteins that lost during paracentesis by eating more specific high biological proteins in meals. This is consistent with that in literatures [6, 7].

CONCLUSION

In conclusion, diet regimen showed a positive change on improving cirrhotic liver patients.

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