

## More Discussion on Nutritional Status - A Case Study at Hanoi Medical University Hospital

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### Abstract

**Purpose:** This paper aims to assess PATIENTS WITH CIRRHOSIS at Hanoi Medical University Hospital (HMHU) in 2022.

**Methodology:** Cross-sectional description. **Main findings:** multiple factors which are common to the underlying disease directly contribute to malnutrition, including (but not limit to) malabsorption and catabolic state. Because of the severe effects of malnutrition on cirrhotic patients, the assessment of nutritional status is very important and necessary.

**Limitation:** Authors may use another method to analyze this case study, as well as expand the model for other cases in developing countries.

**Keywords:** Nutritional status, cirrhosis, malnutrition.

### 1. Introduction

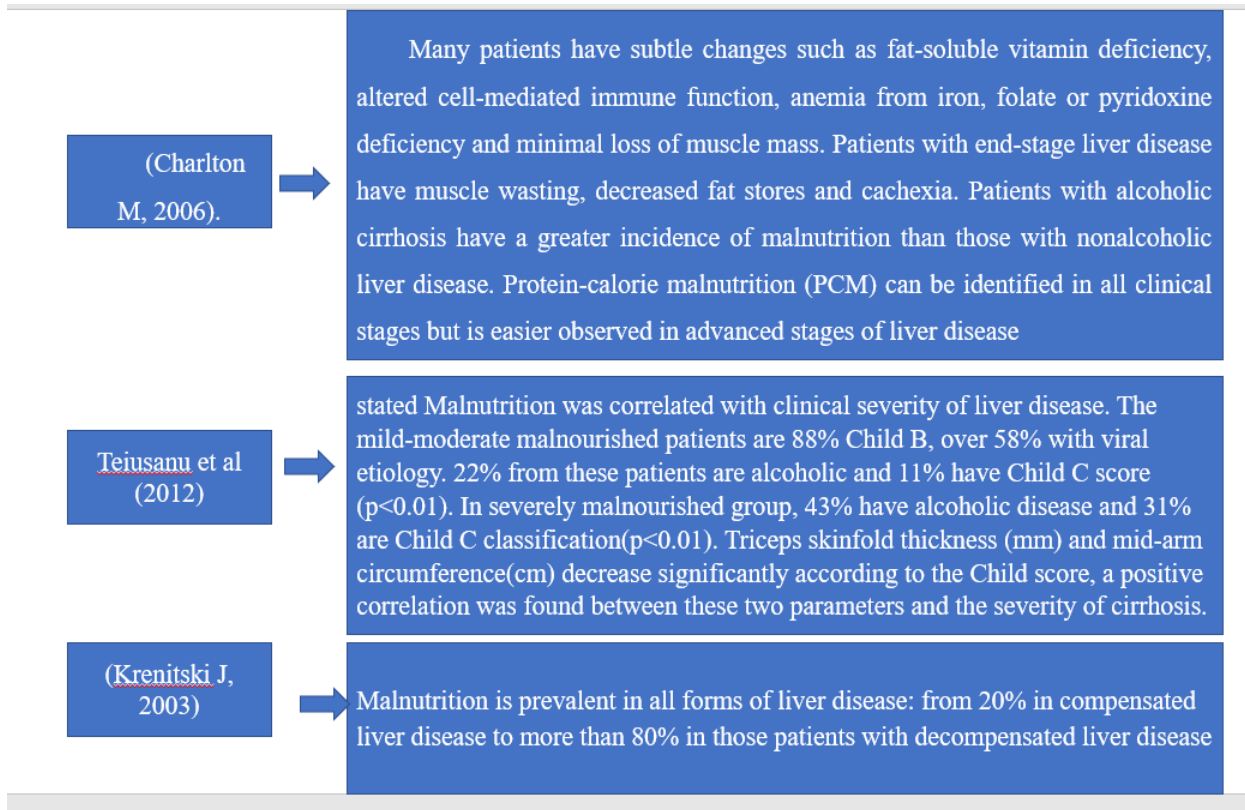
Malnutrition and muscle mass loss (sarcopenia) are associated with a higher rate of complications such as susceptibility to infections, hepatic encephalopathy (HE), and ascites, as well as being independent predictors of lower survival in cirrhosis and in patients undergoing liver transplantation (European Association for the Study of the Liver, 2019).

Thu Trang Nguyen et al (2021) stated that The prevalence of malnutrition in LC patients determined by SGA and HS was remarkably high. Considering this result, HS rather than BMI is a reliable, non-invasive, and effective tool for malnutrition assessment for cirrhotic patients in Vietnam's clinical settings. Consequently, the mean dietary intakes of LC patients were lower than the recommendation; therefore, nutritional educa. And Malnutrition frequently imposes a burden on patients with LC, and it is an independent predictor of lower survival. As a result, it is essential to manage LC patients' nutritional status and dietary intake for better treatment. However, in Vietnam, there are limited data regarding this issue. Authors aimed to describe

the nutritional status, dietary intake, and nutritional practice of cirrhotic patients at Hanoi Medical University Hospital (HMHU) in 2020. For nutritional status assessment, body mass index (BMI), subjective global assessment (SGA) questionnaire, and muscle strength by handgrip strength (HS) were measured. The 24-hour dietary recall method, as well as some open questions, were also collected for the nutritional practice assessment. The prevalence of malnutrition determined by BMI was 12.5%; however, the rate was remarkably high from SGA with 60% and from HS with 75%. The mean energy and protein consumption per ideal body weight (IBW) were  $24.6 \pm 12.0$  kcal/IBWkg and  $1.0 \pm 0.5$  g/IBWkg, respectively. Moreover, 40% of the patients claimed that they restricted animal protein. The percentage of study's patients who had  $\geq 4$  meals/day and who ate a late evening snack was only 32.5% and 22.5%, respectively. As for those who took an LES, the average energy, carbohydrate, and protein in this study were only 140kcal, 19g, and 5.1g respectively.

And we analyze related studies in below table as follows:

**Figure 1** - Previous studies



(source: author synthesis)

Next, Teiusanu et al (2012) also stated that it is easier in stage (advanced) in which Protein-calorie malnutrition (PCM) although in all stages it is identified. And Craig J. McClain (2016) mentioned that almost kinds of cirrhosis we see malnutrition esp. In most cases of cirrhosis - alcoholic patients (so-called alcoholic cirrhosis).

Hence authors choose this topic “**DISCUSSION ON NUTRITIONAL STATUS - A CASE STUDY AT HANOI MEDICAL UNIVERSITY HOSPITAL**”.

**2. Methodology**

**Research variables and indicators**

- General information of subjects

**3.2. Nutritional status of patients with cirrhosis**

- Patient's nutritional status: BMI, SGA, biochemical tests.
- Child-Pugh-Turcotte classification (CPT): A, B or C

**3. Main findings**

**3.1 Characteristics of patients with cirrhosis**

Male patients were 6.3 times higher than female patients. This result is different from the results of Suzana and Marcellus<sup>12</sup> with the male/female ratio of 1.7/1. Even though, the percentage of male cirrhotic patients is higher than female.

*Table 3.2. Anthropometric characteristics of subjects*

Characteristics		Values		
		Min	Max	Mean ± SD
Height (cm)	Female (n=15)	119	168	153.6 ± 10.64
	Male (n=94)	110	176	164.45 ± 6.94
Weight (kg)	Female (n=15)	38	62	54.67 ± 7.16
	Male (n=94)	44	90	61.55 ± 7.25

BMI (kg/m <sup>2</sup> )	Female (n=15)	18.61	26.83	23.2 ± 2.41
	Male (n=94)	15.59	37.19	22.81 ± 2.8

Table 3.2 shows that the average weight of subjects was 61.55±7.25 kg for male, 54.67±7.16 kg for female. The mean height of men was 164.45±6.94 cm; female was 153.6±10.64 cm. The lowest BMI in men was 15.59 kg/m<sup>2</sup>, the highest was 37.19 kg/m<sup>2</sup>, in women the lowest was 18.61 kg/m<sup>2</sup> and the highest was 26.83 kg/m<sup>2</sup>.

### Conclusion

Controlling dry mouth, controlling medication dosage and correcting taste changes are important in improving the nutritional status of patients with cirrhosis. In addition, multiple factors which are common to the underlying disease directly contribute to malnutrition, among them, anorexia, nausea, deficient food intake, maldigestion, malabsorption and catabolic state.

Because of the severe effects of malnutrition on cirrhotic patients, the assessment of nutritional status is very important and necessary.

### Limitation of this study

Authors may consider to expand study model for other developing nations

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