OPEN ACCESS

Saudi Journal of Medical and Pharmaceutical Sciences

Abbreviated Key Title: Saudi J Med Pharm Sci
ISSN 2413-4929 (Print) | ISSN 2413-4910 (Online)
Scholars Middle East Publishers, Dubai, United Arab Emirates
Journal homepage: https://saudijournals.com

Original Research Article **Hepato-Gastro-Enterology**

Sexual Dysfunction in Women with Chronic Liver Disease: Prevalence and Risk Factors

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DOI: https://doi.org/10.36348/sjmps.2025.v11i08.009 | **Received:** 05.06.2025 | **Accepted:** 11.08.2025 | **Published:** 14.08.2025

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Abstract

***Background*:** Female sexual health is often underexplored in the context of chronic liver diseases, despite its key role in overall quality of life. Sexual dysfunction in this population is rarely addressed during hepatology consultations, even though it may be aggravated by clinical complications such as cirrhosis. ***Methods*:** This was a cross-sectional, descriptive, and analytical study conducted between January and December 2024, including 106 female patients (53 with chronic liver disease, 53 controls). All completed the FSFI questionnaire. A score < 26 indicated sexual dysfunction. Data were analyzed using Jamovi version 2.2.5. ***Results*:** Sexual dysfunction (FSFI score < 26) was observed in 60.4% of patients with chronic liver disease, versus 28.3% in the control group ($p < 0.001$). The most affected domains were lubrication (84.4%), satisfaction (75%), and desire (65.6%). Cirrhosis was significantly associated with dysfunction (OR = 6.8; $p = 0.046$). ***Conclusion*:** Sexual dysfunction is frequent in women with chronic liver disease, especially in those with cirrhosis. Despite its high prevalence, it remains neglected in routine hepatology practice, underscoring the need for integrated sexual health assessment.

Keywords: Sexual Health, Chronic Liver Disease, Female Sexual Dysfunction, FSFI.

INTRODUCTION

Chronic liver diseases (CLDs) are common long-term conditions associated with a considerable morbidity and mortality burden for affected individuals. Despite advances in clinical care, certain aspects such as sexual health remain underexplored especially in women. Sexual dysfunction is frequent in chronic illnesses but rarely investigated in liver disease. Bio-psycho-social factors such as fatigue, hormonal changes, anxiety or low self-esteem also can contribute to impairment in sexual function. Yet this gets little discussion at the time of hepatology consultations. The Female Sexual Function Index (FSFI), validated in Arabic, provides a standardized tool to assess sexual function across six domains: desire, arousal, lubrication, orgasm, satisfaction, and pain. This study aimed to evaluate the prevalence of sexual dysfunction in women with chronic liver disease, compare it to a control group, and identify associated risk factors.

MATERIALS AND METHODS

This is a descriptive, cross-sectional, and analytical study conducted in the Hepato-Gastroenterology and Proctology Department at Ibn Sina University Hospital, Rabat in Morocco between January and December 2024. We included 106 women over 18 years of age, divided into two groups: 53 patients with chronic liver disease (CLD) and 53 controls without liver pathology.

All participants completed the Arabic version of the Female Sexual Function Index (FSFI).

A total score < 26 indicated sexual dysfunction. Clinical data including age, marital status, medical and surgical history, obstetric background, liver disease etiology were recorded using a standardized clinical form.

Inclusion criteria were female patients aged over 18 years, followed in outpatient hepatology consultation, with current or past sexual activity, and who agreed to complete the Arabic version of the FSFI questionnaire. Exclusion criteria included refusal to participate, incomplete data, and the presence of a gynecological disease.

Statistical Analysis

Statistical analysis was performed using Jamovi 2.2.5. Quantitative variables were expressed as mean ± standard deviation or median [min–max]. Categorical variables were presented as frequencies and percentages. A multivariate logistic regression was used to identify independent risk factors for sexual dysfunction. A p-value < 0.05 was considered statistically significant.

RESULTS

A total of 106 women were included, with 53 in the chronic liver disease group and 53 in the control group. The mean age was 44.4 ± 7.6 years [29–60]. Most participants had a history of childbirth, with 83% reporting obstetric history.

In the CLD group, 60.4% (n = 32) had an FSFI score < 26, compared to 28.3% (n = 15) in the control group (p < 0.001) (Figure 1). The mean FSFI score among all CLD patients was 23.6 ± 4.85 (Figure 2). All domains were affected, with more pronounced impairment in lubrication (mean score: 4.75; 15 patients, 22.4%) and arousal (3.89; 33 patients, 49.3%), while desire (3.61; 41 patients, 61.2%) and satisfaction (3.67; 39 patients, 58.2%) were also decreased. In patients identified with sexual dysfunction (Figure 3), the mean FSFI score was 19.09 ± 2.04. The most affected domains were lubrication (84.4%), satisfaction (75%), and desire (65.6%).

Cirrhosis was present in 37.7% (n = 20) of CLD patients and was significantly associated with sexual dysfunction (OR = 6.8; p = 0.046). Other variables, including hepatitis B infection, AS well as use of Tenofovir, beta-blockers, and diuretics, and history of hepatic decompensation, were not statistically significant (Figure 4, 5).

Regarding self-reported causes, 23 (71.9%) of patients attributed their difficulties to physical issues-primarily fatigue and ascites-while 16 (50%) cited psychological factors, such as emotional disinterest, fear of contagion, or depression. Notably, none of the CLD patients had been asked about their sexual health during previous medical follow-up.

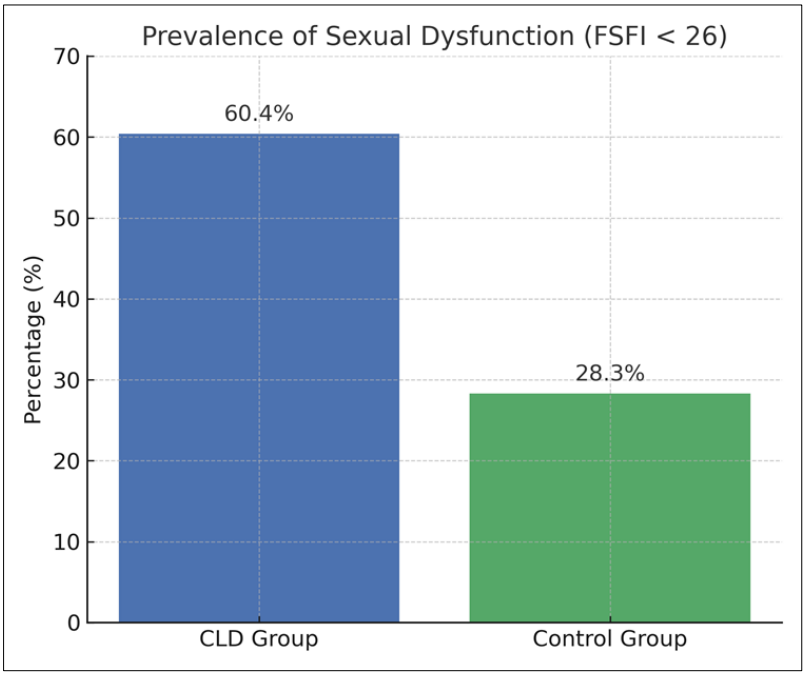

Figure 1: Comparison of sexual dysfunction rates (FSFI < 26) between patients with chronic liver disease and controls

FSFI Domain	Mean Score	Number (%) with Score < 4
Desire	3.61	41 (61.2%)
Arousal	3.89	33 (49.3%)
Lubrication	4.75	15 (22.4%)
Orgasm	3.68	44 (65.7%)
Satisfaction	3.67	39 (58.2%)
Pain	4.05	32 (47.8%)
Total Score	23.64	—

Figure 2: Mean FSFI Domain Scores and Frequency of Scores below 4 among All Patients with Chronic Liver Diseas

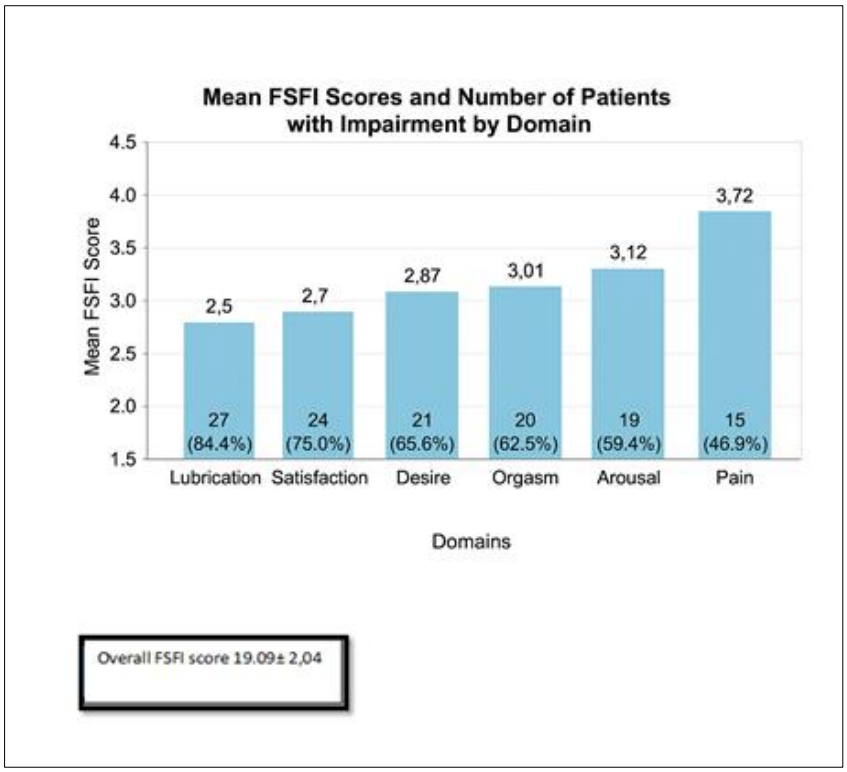

Figure 3: Mean FSFI domain scores among patients with chronic liver disease and sexual dysfunction (FSFI score < 26)

	OR	CI (95%)	*p* value
Cirrhosis	6.800	[1.9 – 24.3]	0.046
Hepatitis B (HBV)	2.267	[0.723–7.105]	0.513
Tenofovir use	1.264	[0.411–3.89]	0.599
beta-blockers use	1,432	[0,45 – 4,55]	0,538
diuretics use	1,679	[0,48 – 5,88]	0,410
Hepatic decompensation	2.348	[0.55–9.96]	0.247

Figure 4: Factors associated with female sexual dysfunction in univariate analysis

	ajustéd OR	CI 95 %	p-value
Cirrhosis	4,9	[1,3 – 18,4]	0,021
Hepatitis B (HBV)	1,6	[0,5 – 6,0]	0,404
Ténofovir USE	2,3	[0,9 – 5,9]	0,089
Hepatic decompensation	1,7	[0,6 – 6,3]	0,281
BETA-BLOCKERS USE	1,5	[0,5 – 4,9]	0,482
DIURETICS USE	1,4	[0,5 – 4,2]	0,540

Figure 5: Independent factors associated with female sexual dysfunction in multivariate analysis

DISCUSSION

Our study highlights a high prevalence of sexual dysfunction among women with chronic liver disease (CLD), affecting more than 60% of patients. This rate is significantly higher than that observed in the control group (28.3%), confirming the strong association between CLD and impaired sexual function. Similar prevalence rates have been reported by La Rosa *et al*., in a multicenter cross-sectional study involving 1,112 women with various chronic illnesses, who found a 60% rate of sexual dysfunction [1], and by Bajaj *et al*., who documented comparable frequencies in a prospective study including 70 women with cirrhosis [2].

The most affected domains of the Female Sexual Function Index (FSFI) in our cohort were lubrication, satisfaction, and desire. Lubrication impairment affected 84.4% of patients, consistent with the hormonal disturbances described in cirrhosis. This aligns with Schiff *et al*., who identified hypoestrogenism and altered sex hormone-binding globulin levels as key contributors to decreased sexual desire and arousal in liver disease [3]. Satisfaction and desire were also notably reduced, possibly reflecting the impact of fatigue, anxiety, and altered body image, as highlighted in previous psychosocial studies of chronic liver disease patients [5, 6]. Unlike in other chronic inflammatory

diseases such as endometriosis, pain was not a prominent feature affecting sexual function in our cohort [7].

Cirrhosis was the only clinical factor significantly associated with sexual dysfunction, with an odds ratio of 6.8 ($p = 0.046$), supporting the findings of Bajaj *et al*., who demonstrated that disease severity correlates with worsening sexual health [8]. Physiopathologically, chronic systemic inflammation, portosystemic shunting of neuroactive substances, and micronutrient deficiencies may alter endocrine and neurological pathways regulating sexual response, as discussed by Smith and Jones [9, 10]. Additionally, liver dysfunction often results in hormonal imbalances, notably hypoestrogenism and increased levels of sex hormone-binding globulin, reducing the bioavailability of sex steroids critical for lubrication and libido. Psychological factors, including fatigue, anxiety, and altered body image due to disease complications, also contribute to sexual dysfunction, highlighting the multifactorial nature of these disturbances.

Interestingly, hepatitis B infection, antiviral treatment with Tenofovir, and hepatic decompensation were not significantly linked to sexual dysfunction, consistent with the inconclusive effects reported in literature regarding antivirals and sexual health [14].

A striking finding was that none of the women had been questioned about their sexual health during hepatology follow-up, echoing Patil et al.'s observation that sexual health remains a neglected topic in hepatology consultations [5]. This underscores the need for systematic sexual function assessments in clinical practice.

Our study's limitations include its monocentric design and relatively small sample size, limiting the generalizability of results. The cross-sectional nature prevents evaluation of changes over time, and reliance on self-reported questionnaires may introduce bias.

Future large-scale, multicenter longitudinal studies are needed to better understand the trajectory of sexual dysfunction in CLD. Additionally, multidisciplinary approaches addressing medical, psychological, and social factors are crucial to improve sexual health and overall quality of life in this population.

CONCLUSION

Chronic liver disease, particularly when complicated by cirrhosis, is associated with high rates of sexual dysfunction in women. Our results indicate that the presence of cirrhosis markedly enhances the risk of sexual function alteration. However, sexual health is still primarily under-addressed in standard hepatology practice. These findings emphasize the importance of increasing awareness among healthcare personnel and promoting a patient-centered approach to treatment. Validated tools, such as the FSFI, should be considered for systematic screening as a means of better assessing and managing this important aspect of quality of life.

Conflict of Interest: The authors declare no conflict of interest.

Funding: This research received no external funding.

Ethical Approval: Informed consent was obtained from all participants.

Summary

Established Knowledge of the Subject

- Chronic liver disease (CLD) is associated with multiple systemic complications, including hormonal and psychological disorders.
- Sexual dysfunction is a common yet underdiagnosed condition in females with chronic conditions.
- Data is scarce that specifically addresses sexual dysfunction in female patients with CLD, especially in low- and middle-income nations.

Significant and / or New Findings of This Study

- Our study shows a high prevalence (over 60%) of sexual dysfunction among women with chronic liver disease.
- Multivariate analysis reveals cirrhosis as an independent predictor of sexual dysfunction.
- Desire and arousal are the most severely affected FSFI domains in affected women.
- The study emphasizes the need for routine sexual health assessment in the management of female CLD patients.

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