

Osteoporosis in Cirrhosis: A Closer Look at Diagnostic Gaps and Management Strategies

Montena Grace*

Department of Pharmacoeconomics, University of Medicine and Pharmacy of Craiova, Craiova, Romania

Introduction

Liver cirrhosis is a chronic and progressive liver disease that leads to significant morbidity and mortality. One of its common complications is osteoporosis, a condition characterized by reduced Bone Mineral Density (BMD) and an increased risk of fractures. Osteoporosis in cirrhosis arises from a variety of factors, including hormonal imbalances, liver dysfunction, malnutrition, and chronic inflammation. Despite its high prevalence in cirrhotic patients, osteoporosis remains underdiagnosed and undertreated. Bone Mineral Density (BMD) assessment is crucial for identifying osteoporosis, but it is frequently overlooked due to several barriers that impede proper diagnosis and management in these patients [1].

Description

There are various methods to assess osteoporosis in adults with liver cirrhosis. Dual-Energy X-ray Absorptiometry (DXA) is the gold standard for measuring bone density and is commonly used to diagnose osteoporosis. However, DXA has limitations in patients with liver cirrhosis due to the altered bone architecture and the presence of calcified plaques, which can affect the accuracy of the measurements. Other methods, such as quantitative ultrasound and peripheral quantitative computed tomography, have been proposed as alternative methods for assessing bone health in liver cirrhosis patients. One of the main barriers is the lack of awareness among healthcare providers about the association between cirrhosis and osteoporosis. Another barrier is the limited availability of testing in some regions, especially in low-resource settings. Moreover, the cost of testing can be a significant barrier for patients in some countries. Facilitators for osteoporosis assessment among cirrhotic patients include raising awareness among healthcare providers about the importance of assessing BMD in cirrhosis patients. The availability of affordable testing and guidelines for the management of osteoporosis in cirrhosis can also facilitate the diagnosis and treatment of this condition [2].

Early detection and management of osteoporosis in adults with liver cirrhosis can prevent further complications such as fractures and improve quality of life. Strategies for preventing and managing osteoporosis in liver cirrhosis patients include maintaining a healthy diet, physical activity, calcium and vitamin D supplementation, and medications such as bisphosphonates [3]. Assessment of osteoporosis among adults with liver cirrhosis is essential to identify those at risk of fracture and to develop effective preventive strategies. Several methods can be used to assess bone density, including dual-energy X-ray absorptiometry and quantitative ultrasound, DXA is considered the gold standard for the diagnosis of osteoporosis and is recommended for adults with liver cirrhosis who have additional risk factors, such as advanced age or a history of fractures. QUS is a non-invasive and cost-effective alternative to DXA and can be used to screen for osteoporosis in adults with liver cirrhosis

***Address for Correspondence:** Montena Grace, Department of Pharmacoeconomics, University of Medicine and Pharmacy of Craiova, Craiova, Romania, E-mail: gracemon90@yahoo.com

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[4,5].

Conclusion

Osteoporosis is a common complication in adults with liver cirrhosis. Early assessment and management of bone health in these patients are crucial to prevent further complications. Alternative methods for assessing bone health in liver cirrhosis patients should be considered due to the limitations of the gold standard DXA. Future research should focus on developing effective strategies for preventing and managing osteoporosis in adults with liver cirrhosis.

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Conflict of Interest

There are no conflicts of interest by author.

References

1. Kanis, John A. and J. A. Kanis. "Assessment of fracture risk and its application to screening for postmenopausal osteoporosis: synopsis of a WHO report." *Osteoporosis international* 4 (1994): 368-381.
2. Buenger, Fabian, Yasser Sakr, Niklas Eckardt and Christian Senft, et al. "Correlation of quantitative computed tomography derived bone density values with Hounsfield units of a contrast medium computed tomography in 98 thoraco-lumbar vertebral bodies." *Arch Orthop Trauma Surg* (2021): 1-6.
3. Hendrickson, Nathan R., Perry J. Pickhardt, Alejandro Munoz Del Rio and Humberto G. Rosas, et al. "Bone mineral density T-scores derived from CT attenuation numbers (Hounsfield units): Clinical utility and correlation with dual-energy X-ray absorptiometry." *Iowa Orthop J* 38 (2018): 25.
4. Blach, Sarah, Stefan Zeuzem, Michael Manns and Ibrahim Altraif, et al. "Global prevalence and genotype distribution of hepatitis C virus infection in 2015: a modelling study." *Lancet Gastroenterol Hepatol* 2 (2017): 161-176.
5. Crabb, David W., Gene Y. Im, Gyongyi Szabo and Jessica L, et al. "Diagnosis and treatment of alcohol-associated liver diseases: 2019 practice guidance from the American association for the study of liver diseases." *Hepatology* 71 (2020): 306-333.

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