

From Gamma Gandy Bodies to Geographic Enhancement: An Imaging Approach to Diagnosing Congestive Splenomegaly

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Abstract

This article discusses a case of a 29-year-old woman with a history of hepatic transplant for liver cirrhosis who presented with splenomegaly related to heaviness and tenderness in the left upper quadrant for several years. Radiologic imaging techniques, including helical CT and MRI, were crucial in the diagnosis of congestive splenomegaly, a condition characterized by enlargement of the spleen due to increased pressure in the portal vein. The imaging findings showed a geographic enhancement pattern at the portal phase, in addition to the presence of Gamma Gandy bodies, which are a hallmark of this condition. The management of congestive splenomegaly is complex and may involve medical, surgical, or interventional approaches.

Keywords: *Congestive Splenomegaly; Hepatic Transplant; MRI; Portal Hypertension*

Introduction

Congestive splenomegaly is a condition that involves the enlargement of the spleen due to increased pressure in the portal vein. This condition often occurs as a result of liver cirrhosis and portal hypertension, which can cause slow blood flow in the spleen, leading to splenic congestion and subsequent enlargement. The purpose of this study is to present a case of congestive splenomegaly in a patient with a history of hepatic transplant for liver cirrhosis and to highlight the critical role of radiologic imaging techniques, such as helical CT and MRI, in the diagnosis and management of this condition. The study aims to describe the characteristic features of Gamma Gandy bodies and geographic enhancement patterns seen on imaging in patients with congestive splenomegaly.

Case Presentation

A 29-year-old woman with a history of hepatic transplant for liver cirrhosis reported experiencing heaviness and tenderness in the left upper quadrant for several years, which was related to splenomegaly. Follow-up helical CT and MRI revealed a large spleen with delayed and inhomogeneous enhancement after contrast agent administration, demonstrating a geographic enhancement pattern at the portal phase, in addition to that, MRI showed the presence of Gamma Gandy bodies (Figure A and B), consistent with congestive splenomegaly.

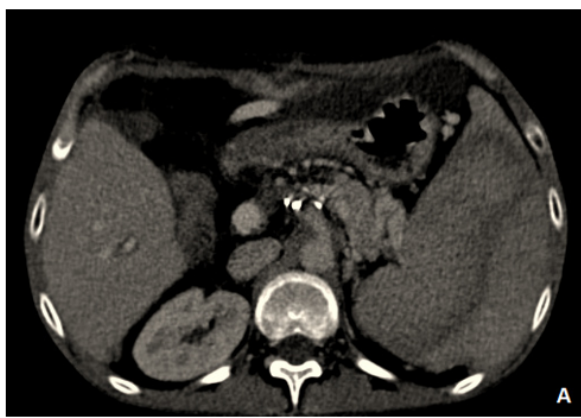


Figure A: Axial CT section with contrast enhancement at portal phase shows a delayed and inhomogeneous enhancement realizing a geographic aspect of the spleen.

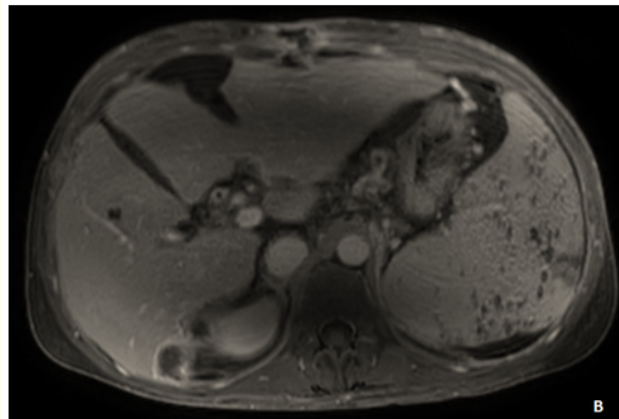


Figure B: Axial MRI, T1WI with fat saturation section, after gadolinium administration at portal phase, shows multiple splenic foci of low signal intensity, related to Gamma Gandy bodies.

Discussion

Congestive splenomegaly is a condition characterized by enlargement of the spleen due to increased pressure in the portal vein, often as a result of liver cirrhosis and portal hypertension. In this case, the patient’s history of hepatic transplant for liver cirrhosis was a key factor in the development of congestive splenomegaly. The geographic enhancement pattern seen on imaging is a result of slow blood flow in the spleen due to portal hypertension, causing uneven distribution of contrast material in the splenic parenchyma [1].

The use of radiologic imaging techniques such as helical CT and MRI is critical in the diagnosis and management of patients with congestive splenomegaly. These techniques can provide detailed information on the size, morphology, and vascular supply of the spleen,

as well as information on any associated complications. In this case, radiologic imaging helped to confirm the diagnosis of congestive splenomegaly and identify the presence of Gamma Gandy bodies, which are a hallmark of this condition [2]. Several conditions of slow blood flow can lead to this phenomena, such as portal vein thrombosis, spleen vein occlusion, right heart failure, and portal hypertension.

The management of congestive splenomegaly is complex and may involve medical, surgical, or interventional approaches. Treatment is typically focused on reducing portal hypertension and improving blood flow to the spleen, with the goal of reducing splenic congestion and preventing complications such as portal vein thrombosis and variceal bleeding. In this case, the patient's history of hepatic transplant may have implications for treatment options, as certain medications and interventions may be contraindicated or require close monitoring.

Conclusion

In conclusion, the case of a 29-year-old woman with hepatic transplant for liver cirrhosis and congestive splenomegaly highlights the importance of radiologic imaging in the diagnosis and management of complex medical conditions. The geographic enhancement pattern seen on imaging is a key feature of congestive splenomegaly and can aid in the diagnosis of this condition. Treatment of congestive splenomegaly is multifaceted and requires a thorough understanding of the underlying pathophysiology and any associated medical conditions.

Bibliography

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