THE ROLE OF MULTIDETECTOR COMPUTED TOMOGRAPHY IN DIAGNOSIS OF HEPATIC PSEUDOLESION

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Introduction

Hepatic pseudolesions are imaging artifacts that can mimic or obscure real liver lesions, often due to localized blood flow disturbances. Their detection has increased with advanced imaging techniques like MDCT and dynamic MRI. Accurate identification is crucial to avoid unnecessary tests, biopsies, or misdiagnoses, as pseudolesions may be mistaken for real pathology or hide serious conditions. Identifying liver masses involves analyzing dynamic contrast-enhanced imaging phases, but the liver's distinct blood flow patterns can lead to pseudolesions, making diagnosis more challenging.

Aim of the work

The aim of this study was to propose a review of hepatic pseudolesions diagnosis using MDCT and explaining means to differentiate these lesions from true parenchymal lesions.

Patients and Methods

PATIENTS: The study was conducted on patients who are referred to the Radiology Department of Alexandria University Hospitals to perform MDCT of the liver for screening or diagnosing focal hepatic lesion.
METHODS:
All patients were subjected to:
•Full history taking .
•Clinical examination.
•Laboratory investigations:renal function tests (urea and creatinine).
•Imaging :ultrasound screening and MDCT triphasic liver while MRI whenever indicated.

Results

The pseudolesions were classified according to the enhancement pattern , location and other radiological characteristics into four major categories as follows:
1-Seven lesions were pathophysiologic pseudolesions in the form of third inflow (13.0%).
2-Twenty two lesions were parenchymal pseudolesions (40.7%).
3-Sixteen lesions were vascular related pseudolesions (29.6%).
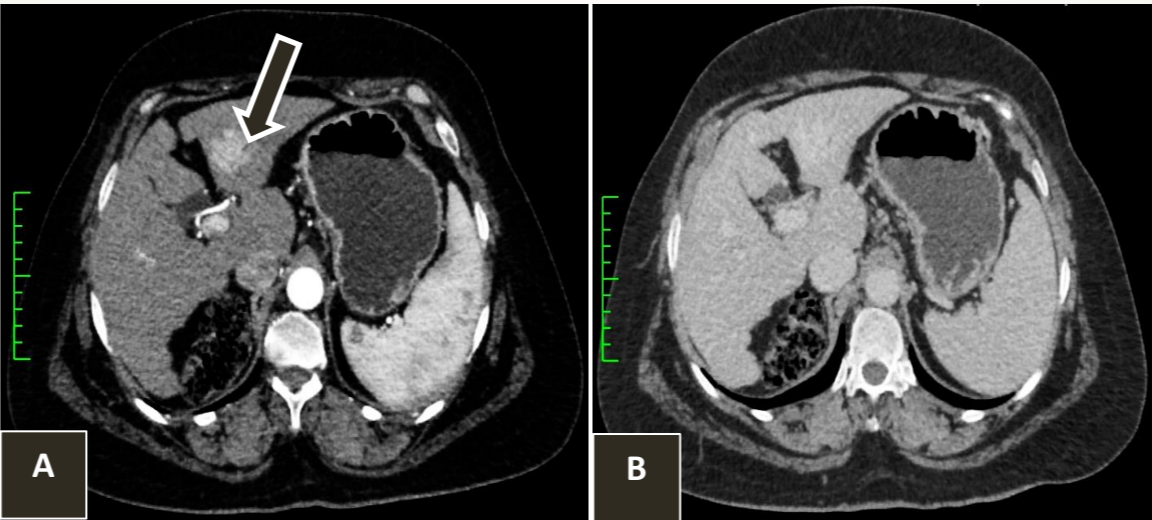4-Nine were pitfalls related pseudolesions (16.7%).

Figure (1): 73 year old female, with cirrhotic liver.

A: Axial CT arterial phase showed a well defined hyperenhancing focal lesion at segment III (black arrows).
B: Axial CT delayed phases showed isoenhancement of the lesion.
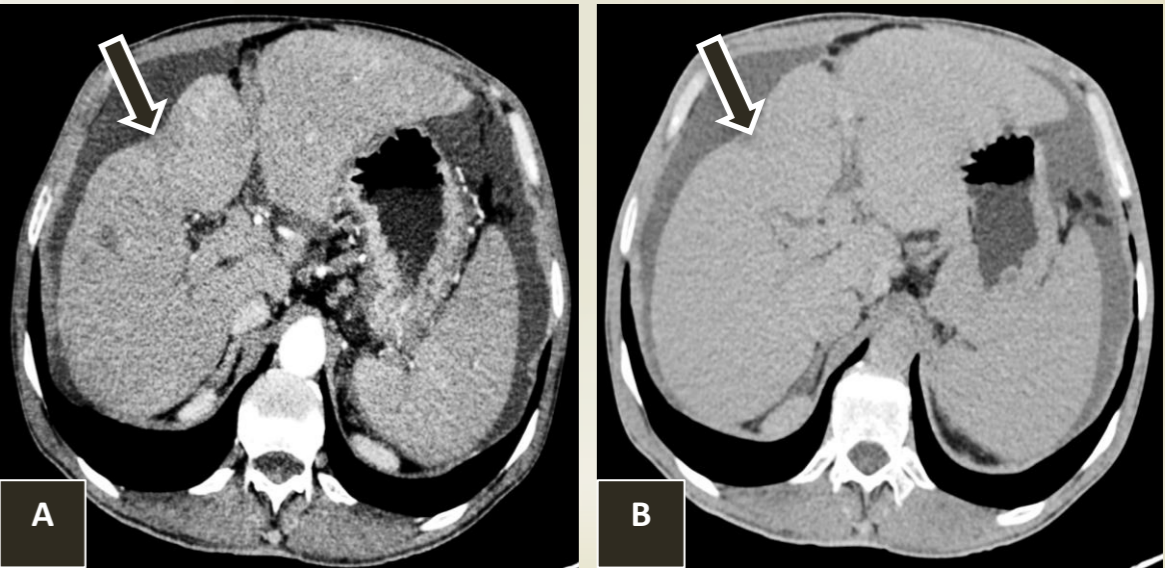…Findings of arterio-portal shunt.

Figure (2): 55 year old male, with cirrhotic liver.

A: Axial CT arterial phase revealed a subcapsular hypoenhancing focal lesion at segment VIII with capsular retraction (black arrow).
B: Axial CT delayed phase showed delayed enhancement (black arrow).
…Findings of confluent hepatic fibrosis.

Conclusion

Recognizing hepatic pseudolesions is essential to avoid mistaking them for true tumors. Both non-contrast and contrast-enhanced CT scans aid in distinguishing these lesions. Accurate identification relies on understanding their imaging features, enhancement patterns, clinical associations, and patient history, helping radiologists confidently diagnose these typically non-intervention-requiring findings.