Role of MRI diffusion and apparent diffusion coefficient values in characterization of scrotal lesions

Wageeh A. Ali MD

Diagnostic and Interventional Radiology-Assiut University-Faculty of Medicine

Abstract

Background: Despite scrotal Ultrasound remains the gold standard imaging method in the diagnosis of scrotal lesions. Magnetic resonance (MR) imaging of the scrotum may offer appreciated information in the recognition and interpretation of different scrotal lesions. MR evaluation of the scrotum achieves well in focusing scrotal masses; hence, discriminating intra-testicular and extra-testicular scrotal lesions. The benefits of MRI are orchestrated imaging of both testicles and both inguinal regions, acquisition of adequate anatomic information, and acceptable tissue contrast. A preoperative characterization of the histological nature of numerous scrotal masses is also conceivable in many cases.

This study aimed to evaluate the role of MR diffusion weighted (DWI) and apparent diffusion coefficient (ADC values) in characterization of scrotal lesions.

Results: There was a significant difference between ADC values of malignant testicular lesions and normal testicular tissues as well as benign testicular lesions (P=0.000). At a cut-off ADC value of ≤1.1, it had a sensitivity of 86.4%, specificity of 97.4%, positive predictive value of 95%, and negative predictive value of 92.5% in the characterization of intratesticular masses.

Conclusion: Diffusion weighted images, ADC value and conventional MRI imaging can help differentiate between benign and malignant scrotal lesions and exclude the unnecessary drastic orchiectomy

Key words: DWI: Diffusion weighted imaging; ADC: Apparent diffusion coefficient: scrotal lesions.

Biography:

Wageeh Abdelhafeez has completed his PhD at the age of 40 years from Assiut University and. He. He has published more than 2 papers in reputed journals and has been serving as an editorial board member of repute..

Speaker Publications:

1. "Prognostic impact of toll-like receptors 2 and 4 expression on monocytes in Egyptian patients with hepatocellular carcinoma, Immunologic Research."
2. "Endovascular Embolization and Direct Percutaneous Injection in Management of Craniofacial Arteriovenous Malformation".
3. "Different Diagnostic Imaging Procedures In Cases Of Thyroid Swelling."
4. "Utility of Single-Photon Emission Computed Tomography/Computed Tomography in Suspected Unilateral Condylar Hyperplasia: A Histopathologic Validation Study"

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