

Pokémon ball sign in mature cystic teratoma of the ovary

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CASE

Mature cystic teratoma of the ovary (MCT, dermoid cyst) accounts for 5-25% of ovarian neoplasms. They are typically unilateral, unilocular, evenly contoured lesions that can grow up to 15 cm in size. They contain mature tissue of ectodermal, mesodermal and endodermal origin. Ectoderm and endoderm are the most abundant germ cell layers in the tumor wall. Therefore, mature skin tissue, hair and fat usually form the content of an MCT.^{1,2}

A 43-year-old female patient was admitted with a diagnosis of a pelvic mass. A magnetic resonance imaging (MRI) of the pelvis was performed. MRI revealed a 14x13x10 cm mass with a fat-fluid level in the midline of the pelvis. The mass contained a floating nodular structure with a diameter of 29 mm. With these findings, the lesion was diagnosed as a cystic teratoma (**Figure A, B**; thin white arrows). After surgical treatment of the lesion, histopathology confirmed the diagnosis of MCT. The patient's postoperative follow-up was without complications. The patient gave written consent for this study.

On cross-sectional imaging, MCTs have a broad radiologic spectrum, ranging from a pure cystic mass to a complex cystic mass with a distinct solid component. In addition to the fat content, there are some specific findings such as the presence of Rokitansky nodules (dermoid plugs), calcified or serrated structures, fluid or fatty fluid. Floating balls in a cyst are a rare pathognomonic feature of MCT and are referred to as a "floating ball sign". The floating balls in MCT can be single or multiple. Floating balls in MCT contain fat, hair and soft tissue and can provide different radiologic images in imaging studies due to their variable histologic content. In addition, the mobility of the floating balls due to the patient's position during radiologic examination is a helpful finding for diagnosis.¹⁻⁴ This appearance can also be referred to as a Pokémon ball sign as it resembles a Pokémon ball. In a patient with a complex cystic ovarian mass, a fat-fluid level and the appearance of a floating ball on radiologic imaging are considered pathognomonic for MCT.

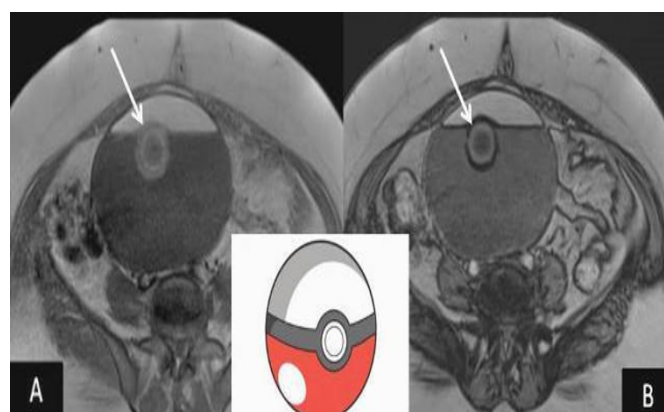


Figure. Axial (A) T1-weighted and (B) phase-shifted MR images showing a thin-walled, complex cystic lesion in the pelvic region containing a fat-fluid level and a round nodule (Pokémon ball sign) in the shape of a floating ball (thin white arrows) in its central part

ETHICAL DECLARATIONS

Informed Consent

The patient signed and free and informed consent form.

Referee Evaluation Process

Externally peer-reviewed.

Conflict of Interest Statement

The authors have no conflicts of interest to declare.

Financial Disclosure

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Author Contributions

All of the authors declare that they have all participated in the design, execution, and analysis of the paper, and that they have approved the final version.

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