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Multiple intracystic floating balls: an unusual but unique sonographic pattern of mature cystic teratoma

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DESCRIPTION

Mature cystic teratoma is the most common benign ovarian neoplasm occurring in the reproductive age group.¹ Sonography is invariably the primary modality for diagnosis. The great diversity in components of teratomas results in varied sonographic appearances. Certain features like tip-of-iceberg sign, fat-fluid level, dermoid mesh and rokitansky protuberance (dermoid plug) are specific to this entity and considered diagnostic.² A sonographic appearance of multiple free-floating spherical balls in a cyst as seen in the presented case is rare² and may present a diagnostic difficulty to the unwary.

Transabdominal sonography in a 23-year-old patient complaining of lower abdominal discomfort revealed a 12×8 cms cystic mass in the lower abdomen. The cyst had a striking ultrasound appearance with multiple distinct, round 1–2 cm sized echogenic globules floating in it

(figure 1). CT scan demonstrated a thin-walled cyst with hypodense floating balls within (figure 2). At laprotomy, a unilocular right ovarian cyst containing serous fluid and numerous small cheese-like sebum balls was found (figure 3). Histopathology confirmed the diagnosis of mature cystic teratoma; spherules contained desquamated keratin, fibrin, hemosiderin and sebaceous debris with skin squams and fine hair shafts and only a small amount of fat component.

The mechanism of formation of these globules is unclear till date. It is postulated that globules are formed by aggregation of sebaceous material around a nidus while moving in the cyst resulting in concentric layers of sebaceous material. The lower specific gravity than cyst contents accounts for their mobility.³

Sonography is diagnostic and further workup is unlikely to show any additional features. To the best of

Figure 1 Sonogram showing multiple echogenic floating spherules in a cyst.

Figure 2 Axial CT image shows a thin-walled cyst with hypodense floating balls within.

Figure 3 Gross specimen of the ovarian cyst showing multiple cheese-like sebum balls in serous fluid.

our knowledge, this appearance has not been reported in other tumours and is pathognomic for mature cystic teratoma.

Competing interests None.

Patient consent Obtained.

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