
Wandering Calcified Ovary in an Adolescent

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A wandering calcified ovary was noted incidentally in a 16-year-old girl on a barium enema study. Ultrasound and computed tomography of the pelvis confirmed the diagnosis. The etiology of this entity and complete differential diagnosis of a mobile abdominal calcification is discussed in detail.

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A 6-year-old girl had a barium enema examination for vague abdominal pain. Preliminary abdominal radiograph showed a 2.5 x 1.0 cm. calcification in the pelvis (Figure 1).



Figure 1: A small ovoid calcification in the mid-pelvis, near the colonic gas overlying the sacrum. The pelvic bones are normal.

This calcification had a different location in the pelvis or abdomen on several radiographs during the study (Figure 2).



Figure 2: Barium enema study shows the ovoid calcification that appears in the left lower abdomen. The position of the calcification is changed significantly when compared the preliminary radiograph (Fig 1). The colon appears normal. There is normal reflux into the distal small bowel.

Ultrasound was subsequently performed for further assessment of this mobile calcification. The left ovary could not be identified. The right ovary and other pelvic and abdominal structures were unremarkable. A pelvic CT examination also performed that showed this calcification in the region of the left adnexa, but no identifiable ovarian or other soft tissue in relation to the calcification on the same side (Figure 3).

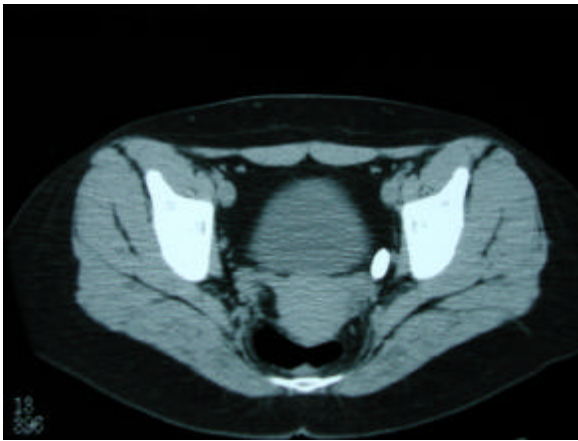


Figure 3: CT of the pelvis performed without oral or IV contrast administration shows the ovoid calcification in the left adnexal region. Normal adnexal structures are seen on the right.

The right ovary and other pelvic organs appeared unremarkable. The diagnostic conclusion was a wandering autoamputated calcified ovary. No surgical intervention was performed due to the fact that this was unlikely to be of clinical significance and most likely did not account for the patient's symptoms.

DISCUSSION

Autoamputation of an ovary is a rare cause of abdominal calcification in a child. The primary event is torsion of the ovary leading to hemorrhagic infarction, most often seen in prepubertal girls (under the age of 13 years), with 51% occurring in children less than 8 years old (1). However, it may occur in patients of all ages, including newborns, and has also been shown to occur in utero (2). This is somehow more common on the right than the left (3,4).

The etiology of ovarian torsion remains controversial. The ovary and tube are extremely mobile, and are normally able to twist through 90 degrees without significant compromise (1). The degree of twist may be increased by an abnormally long tube, mesosalpinx, or meso-ovarium. There may be predisposing factors contributing ovarian torsion such as increased ovarian size and weight due to pelvic congestion or from neoplasia. If torsion is incomplete, a partial

blockage of the veins and lymphatics results in congestion of the affected ovary (5). Complete impairment of blood supply, however, can result in ischemic necrosis of the ovary, followed by autoamputation and calcification.

A detached and freely mobile, often calcified ovary, located in the pelvis or abdomen at some distance from the normal ovarian site is a rare entity and is often diagnosed incidentally (1-3,6). This is believed to be the result of a previous episode of torsion that was unrecognized or occurred in utero. The characteristic, distinguishing feature of an amputated calcified ovary is its ovoid shape (7). Another etiology of mobile ovarian calcification, a pedunculated or amputated ovarian teratoma which usually demonstrates somewhat irregular margins (7). Other causes of mobile abdominal or pelvic calcifications include amputated appendices epiploicae, deposits in the omentum, mummified pieces of free small bowel, various enteroliths, liquid calcification in a psoas abscess, gallstone, omental or mesenteric cysts, and opaque intraperitoneal or intraluminal gastrointestinal foreign bodies (7-9).

When a freely mobile pelvic or abdominal calcification is encountered in a female child or young adult, further history or detailed physical examination are unlikely to uncover the cause. Although a sharply marginated ovoid mobile calcification is most consistent with a wandering calcified ovary from a remote ovarian torsion, ultrasound of the pelvis may help in clarification. This may eliminate unnecessary surgical exploration.

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