Case 2439

Lithopedion: stone baby.
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Section: Genital (female) imaging
Imaging Technique: CT
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Case Type: Clinical Cases
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Patient: 62 years, female

Clinical History:

Palpable abdominal mass with a 17 years history. The patient had recently suffered from lower abdominal discomfort.

Imaging Findings:

The patient was referred to our hospital for palpable abdominal masse with a 17 years history. The patient had recently suffered from lower abdominal discomfort.

Ultrasound revealed a huge densely calcified mass with a normal postmenopausal uterus.

The abdomino-pelvic computed tomographic scan (Figs. 1. 2. 3) showed the presence of an ectopic foetus, with peripheral calcifications.

The femoral length of the lithopedion measured 77 mm, equivalent to a foetus at 40 weeks’ gestation. CT scan studies were unable to identify any organs due to complete calcification of the foetus.

On further questioning, the patient reported that she had become pregnant 17 year before and that the pregnancy had continued for about 8 to 9 months with foetal movement and abdominal distension until she experienced a vaginal bleeding. Because of poor accessibility to doctors and hospitals she stayed at home and sought the alternative medicine. After sometime, the foetal movement and the abdominal distension disappeared and the palpable mass developed.

Discussion:

Lithopedion (litho = stone; pedion = child) is the name given to an extra-uterine pregnancy that evolves to foetal death and calcification. It is a rarely encountered result of an undiagnosed and untreated advanced abdominal pregnancy where the dead foetus is retained in the maternal abdominal cavity and calcification ensues.

The incidence of abdominal pregnancy is 1 of 11,000 live births and lithopedion occurs in 1.5% to 1.8% of these cases. There are less than 300 cases reported in the medical literature. The age of the patients on the date of diagnosis varied from 23 to 100 years, 2/3 of them being over 40 years old. Abdominal pregnancy results from the rupture of tubal or ovarian pregnancy with abdominal cavity implantation.

The development of lithopedion happens under certain conditions: extra-uterine pregnancy; foetal death after 3 months of pregnancy; the egg must be sterile; there cannot be any early diagnosis; local conditions must exist for calcium precipitation. The development of this pregnancy is the same as for abdominal intra-uterine pregnancy until foetal death. After this time, dehydration of tissues and calcium infiltration occur.

An abdominal pregnancy that calcifies can be classified into three sub types according to the involvement of calcification to the membranes and the foetus: lithokelyphos (litho = rock, kelyphos = shell), in which the membranes alone are calcified; lithokelyphopedion in which both membranes and the foetus are calcified, and true lithopedion or lithotecnon, in which the foetus is calcified and the membranes are negligible.

Most cases of lithopedions are found incidentally when taking abdominal films for various reasons, or when a
palpable abdominal mass is felt during pelvic examination. Some associated complications have been reported after a long asymptomatic evolution: urinary bladder and rectum perforation; extrusion of foetal parts through the abdomen wall, rectum and vagina; intestinal obstruction (due to collision of foetal parts with the intestine or adherence) volvulus, fistula formation, cephalopelvic disproportion of a concomitant pregnancy and pelvic abscess.

The diagnosis is revealed by a suggestive clinical history, a pelvic mass found during the physical examinations, and frequently, an X-ray of the abdomen is enough to confirm it. The ultrasound examination shows an empty uterine cavity and a non-specific appearance of the abdominal mass, confusing the diagnosis. CT scan and MRI clearly define the pathology and help to diagnose adherence and other organs affected, although this is not a constant finding.

The differential diagnosis is for other calcified masses like ovarian tumours, myomas, inflammatory masses, urinary tract and bladder tumours, and epiploon calcifications.

**Differential Diagnosis List:** Lithopedion

**Final Diagnosis:** Lithopedion

**References:**


Figure 1

Description: Transverse CT scan of the pelvis shows a densely calcified mass in the pelvic cavity. The head, spine and ribs are well visualised within the mass. Origin:
Figure 2

Description: Transverse CT scan of the abdomen depicting the calcified fetus. Skeletal elements including spine, ribs, and even extremities could be identified. Origin:
**Figure 3**

*Description:* 3-D reconstruction showed diffuse and amorphous calcification through the lithopedion.

*Origin:*