Case Report ISSN 2689-1069

Clinical Reviews & Cases

Ectopic Pregnancy with Lithopedion Formation: Case Report

Seif Nuru[1], Simon Mrema, Denis Katyali, Emmanuel Kajana, Lucas Mgimwa, Reginald Swai

[1]*Department of Surgery, St. Gaspar Referral and Teaching Hospital.*

[2]*Department of Obstetrics and Gynecology, St. Gaspar Referral and Teaching Hospital.*

***Correspondence:**
Seif Nuru, St. Gaspar Referral and Teaching Hospital, P.O.BOX 12, Itigi-Singida, Tanzania, Tel: + 255 784 738 432.

Received: 03 Jan 2025; **Accepted:** 10 Feb 2025; **Published:** 20 Feb 2025

Citation: Seif Nuru, Simon Mrema, Denis Katyali, et al. Ectopic Pregnancy with Lithopedion Formation: Case Report. Clin Rev Cases. 2025; 7(1): 1-3.

ABSTRACT

Lithopedion is a rare obstetric complication, corresponding to an ectopic pregnancy (usually abdominal in location) that progresses beyond the first trimester to fetal death and calcification. We report a case of a 30-year-old woman who was referred to our facility complaining of abdominal swelling and heaviness for 3 years which was preceded by a history of positive urine pregnancy test. CT scan of abdomen and pelvis showed calcified intra-abdominal (omental) mass which was confirmed a lithopedion by laparotomy with excision.

Keywords

Ectopic pregnancy, Lithopedion, calcified intra-abdominal mass.

Abbreviations

CT: Computed tomography, L: Lividity, P: Parity, USS: Ultrasound Scan.

Introduction

The Greek word "Lithopedion" (stone baby) describes an ectopic pregnancy (usually abdominal in location) that progresses beyond the first trimester to fetal death and calcification [1]. This condition is uncommon with reported incidence of 1.5 – 2.0 % of all ectopic pregnancies [2]. It occurs when the fetus in extra-uterine location dies, calcifies and grows too large to be reabsorbed by the mother's body, evading maternal immunity by surrounding itself with a calcified shell [3,4]. Frequently the condition can be asymptomatic for a number of years and there are no typical laboratory tests for diagnosis [5]. Patients seek for medical attention primarily due to secondary symptoms which include abdominal pain, abdominal mass, and other compression symptoms to the bladder or rectum [1].

Cases can be incidentally detected by plain abdominal x-ray or palpation during abdominal pelvic examination [6]. Abdominal USS can help lead to a diagnosis however, CT scan of the abdomen and pelvis is suitable as it help to distinguish lithopedion from other differential diagnoses such as ovarian tumors, urinary tract neoplasms, epiploic calcifications, and calcified uterine fibroid [1,7]. About 350 cases have been reported in the medical literature until 2023 [1]; and to the best of our knowledge, very few cases have been reported in our country, Tanzania.

Case Presentation

We report a case of a 30-year-old uneducated woman P6+3L3 with low socioeconomic status who was referred to our facility with a 3-year history of abdominal swelling and heaviness. This started after she was diagnosed to be pregnant by urine pregnancy test at her nearby health facility where she started antenatal care and made only one visit.

Few months later she started to experience normal menstrual bleeding and there was no history of fetal kicks, abdominal pain, vomiting and had normal urination and bowel habit. She decided to quit antenatal care visit and continued with her normal life. She reported abdominal swelling to increase gradually in size associated with abdominal heaviness. Due to this the patient was sent to traditional healers where she was treated with herbal medications for almost three years without improvement.

On physical examination had stable vital signs and essentially normal systemic findings. Abdominal examination showed grossly distended abdomen with a firm and immobile abdominopelvic mass

on palpation corresponding to 30 cm of fundal height (Figure1). Her urine β-hCG was negative and other laboratory findings were within normal limits.

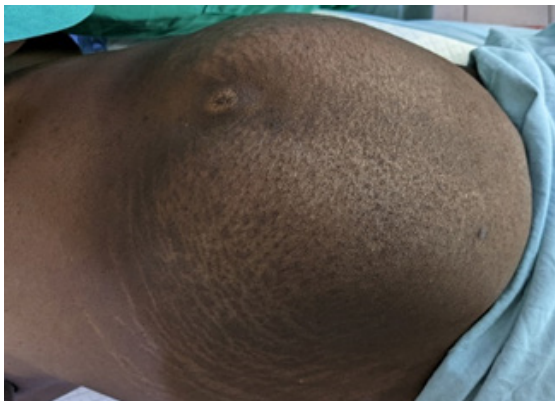

Figure 1: Grossly distended abdomen on exam**.**

Abdominal/pelvic ultrasound showed features of a non-viable intra-abdominal ectopic pregnancy and recommended CT imaging for further evaluation. CT scan of the abdomen and pelvis was done and showed fetal skeleton in the intraperitoneal space at right iliac fossa and midline pubic region. The fetal skeleton appeared to be located within a complete adherence amniotic sac with no fluid. Placenta was also seen located at right side of the uterine adnexa with the sac seen within the omental fat (Figure 2). A conclusion of calcified intra-abdominal (omental) ectopic pregnancy was made and the patient was planned for explorative laparotomy.

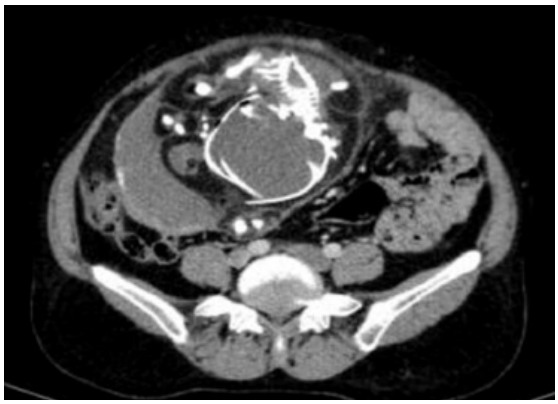

Figure 2: Calcified intra-abdominal mass on CT scan.

Intra-operatively, an intra-abdominal mass adhering to the omentum with direct blood supply from the right ovarian artery was found (Figure 3a, 3b). Dissection of the mass from the omentum and right ovary was done and total extraction of the stony mass roughly shaped like a flexed fetus was achieved.

The mass was surrounded by multiple layers of membranes (Figure 4) where inside was a non-viable flexed female fetus with weight of 1700 g. (Figure 5). The diagnosis of lithopedion was confirmed and the post operative course of the patient was uneventful.

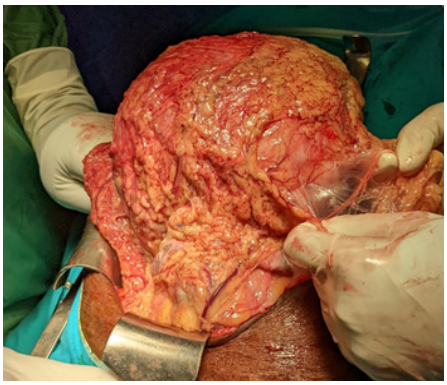

Figure 3a: Mass adhering to the omentum.

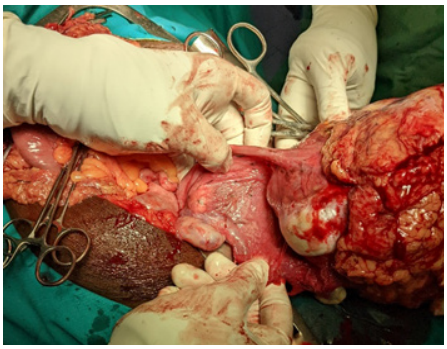

Figure 3b: Direct blood supply from right ovarian artery.

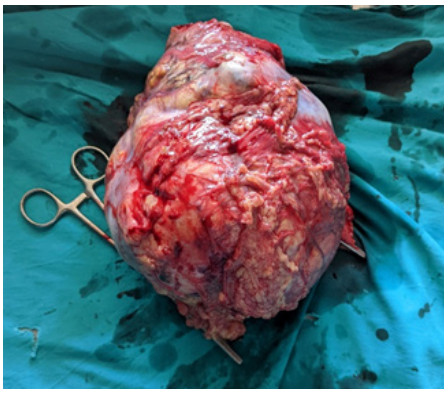

Figure 4: Post-operative image of the Lithopedion.

Figure 5: Non-viable female fetus measuring 1700 g.

Discussion

A term lithopedion, comes from Greek words "lithos" and "pædion" which means "stone" and "child" respectively [1]. It is a calcified ectopic pregnancy that has died and too large to be absorbed [3]. Lithopedion is formed when an extrauterine, deceased fetus remains sterile for at least three months, and avoid being absorbed by the mother's immune system by forming a calcified shell around itself [5]. It is a very rare condition with incidence of 1.5 – 2.0% of all ectopic pregnancies [1].

History of ectopic pregnancy, pelvic inflammatory disease, tubal surgery, congenital and acquired uterine anomalies, multiple spontaneous miscarriages and endometriosis have been identified as risk factors associated with abdominal pregnancy and lithopedion formation [8]. In our case the patient had history of multiple spontaneous miscarriages.

Observations from different published literatures have shown variations of the patient's age between 23 and 100 years, two third of them being older than 40 years [2]. In this case our patient was 30 years. The period of retention of the deceased fetus ranged from 4 to 60 years [5]; contrary in our case, it was estimated to be about 3 years.

Lithopedion can remain asymptomatic for years. Secondary symptoms such as Pelvic pain or mass, a feeling of abdominal heaviness or compressive symptoms to the bladder or rectum, have been reported as primary causes of the patient to seek for medical care [4]. As in this case, patient's lack of formal education, poor socio-economic status and poor health-seeking behavior contributes to delayed presentation [6].

The diagnosis of lithopedion can be suggested by the clinical history and physical examination, by the presence of abdominal or pelvic mass [2]. Plain abdominal X-ray may show the presence of the calcified abdomino-pelvic fetus [1]. For our patient abdominal x-ray was not done. As in this case, abdomino-pelvic ultrasound shows uterine vacuity and a nonspecific appearance of abdominopelvic calcifications [5,8]. CT and MRI are not necessary for the diagnosis, but they are very useful to look for adhesions of the mass, operability of the mass and to differentiate lithopedion from other differential diagnoses including, teratoma and calcified uterine fibroids [1,5]. In our case, the CT scan confirmed the diagnosis of calcified ectopic pregnancy.

Lithopedion is associated with different complications which may results to high rates of maternal and perinatal death. Most of reported complications in literatures include, intestinal perforation, intestinal obstruction, fistulization of fetal parts in the abdominal wall, rectum, or vagina, and pelvic abscess [4,7]. Luckily our patient had no any complication. To prevent these complications, surgical removal becomes the best therapeutic choice for lithopedion [5]. As in our case, postoperative course is generally uneventfully, with few bleeding complications.

Conclusion

Lithopedion can result in serious complications associated with high rates of maternal and perinatal mortality. As a rare condition the diagnosis can be difficult due to the absence of adequate medical attention for clinicians and other health workers. Thorough history and physical examination are important especially during prenatal visits. In addition, imaging tests such as X-rays, repeat ultrasounds, CT scans, and MRIs can aid in the diagnosis of this disorder. To prevent complications, surgical removal of a lithopedion is necessary, while taking into consideration morbidity and mortality risks which may be associated with the surgery.

Consent

Patient's informed written consent was obtained for publication of this case report and any accompanying images. It can be obtained from the corresponding author with reasonable request.

References

1. Gueye C, Niang I, Sano O, et al. Case report of a lithopedion of tubal location, in a young woman. Radiol Case Reports. 2023; 18: 1552-1555.
2. Ramos-andrade D, Ruivo C, Portilha MA, et al. An unusual cause of intra-abdominal calcification: A lithopedion. Eur J Radiol Open. 2014; 1: 60-63.
3. Chinese Medical Association Publishing House Downloaded from mednexus.org on for personal use only. 2024.
4. Moshiri M, Salari AA, Mansorian HR, et al. Lithopedion (Stone Baby). Ann Saudi Med. 1996; 16: 69-70.
5. Sulistiyowati I, Setyawan A, Arifah, et al. A Lithopedion – An Unusual Calcified Abdominal Pregnancy. IJRI. 2023; 1: 14-19.
6. Ahmet Selçuk Gürler, Taner Daş, Gökhan Gitmiş, et al. Incidentally Detected Lithopedion in an 87-Year-Old Lady. Am J Forensic Med Pathol. 2016; 37: 211-213.
7. OVARIAN MASSES Supporting information can be found in the online version of this abstract. 2014; 44: 2014.
8. Endres LK. Abdominal pregnancy with lithopedion formation presenting as a pelvic abscess. Obstet Gynecol. 2000; 7844: 808-810.