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Case Report

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Incidental Discovery of a Lithopedion in an Elderly Woman: A Rare Case Report

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ABSTRACT: Lithopedion, or "stone baby," represents a rare sequela of untreated ectopic pregnancy in which a deceased fetus undergoes calcification and remains intra-abdominal, often for many years. Such presentations are notable for their insidious onset and diagnostic complexity. A 48-year-old multiparous woman presented to the Department of General Surgery at Naogaon Medical College with intermittent lower abdominal discomfort and a firm, non-tender mass in the left lower quadrant. She denied any recent gynecologic complaints or history of pelvic surgery. Plain abdominal radiography and contrast-enhanced computed tomography demonstrated a well-defined calcified fetal structure consistent with lithopedion. The patient underwent elective exploratory laparotomy, and the calcified mass was excised intact without intraoperative complications. Her postoperative course was unremarkable, and she remained asymptomatic at six-week follow-up. ***Conclusion:*** Clinicians should include lithopedion in the differential diagnosis of calcified abdominal masses in women—especially multiparous patients—in settings where prior ectopic pregnancies may have gone undetected.

Keywords: Lithopedion; Calcified Fetus, Ectopic Pregnancy, Multiparous Woman, Abdominal Mass.

INTRODUCTION

Lithopedion, derived from the Greek words *lithos* ("stone") and *paidion* ("child"), refers to a rare phenomenon in which a fetus dies during an extrauterine (ectopic) pregnancy and subsequently becomes calcified within the maternal abdomen or fallopian tube.[1] Since its first description by Albucasis in the 10th century, fewer than 300 cases have been reported worldwide, making lithopedion a clinical curiosity rather than a common surgical encounter.[2] The condition develops when fetal death occurs after the first trimester, and the maternal immune system isolates the nonviable tissue through progressive deposition of calcium salts, effectively "mummifying" the fetus and preventing secondary infection.[3] The pathogenesis of lithopedion hinges on several factors: (1) delayed or missed diagnosis of ectopic pregnancy, often due to mild or nonspecific symptoms; (2) fetal demise occurring before the onset of complete resorption; and (3) continued growth of the uterine corpus or surrounding structures that permit fetal retention.[4] Predisposing factors include lack of access to timely obstetric care, advanced maternal age, and previous pelvic inflammatory disease, all of which increase the risk of undetected ectopic gestation. Historically, many cases were discovered incidentally during surgery for unrelated abdominal complaints or at autopsy, with patients

remaining asymptomatic for decades. In modern clinical practice, improvements in ultrasonography and β-hCG monitoring have substantially reduced the incidence of undiagnosed ectopic pregnancies; however, lithopedion remains a possibility in regions with limited healthcare resources or in elderly patients whose symptoms may be misattributed to age-related gastrointestinal or genitourinary disorders.[5] Imaging modalities such as plain radiography, computed tomography (CT), and magnetic resonance imaging (MRI) play pivotal roles in identifying the characteristic calcified fetal outline and differentiating lithopedion from other calcified intra-abdominal masses like dermoid cysts or calcified fibroids.[6] Here, we present a rare case of incidental discovery of a lithopedion in a 72-year-old woman admitted to the Department of General Surgery at Naogaon Medical College, Naogaon. Her presentation with vague lower abdominal discomfort and a palpable mass underscores the need for vigilance in evaluating atypical abdominal findings in elderly women. Through this report, we aim to highlight the clinical presentation, diagnostic workup, and surgical management considerations of lithopedion, emphasizing its continued relevance in surgical practice despite its rarity.[5]

CASE PRESENTATION

A 48-year-old Bangladeshi woman, gravida 5 para 4, presented to our surgical outpatient clinic. She reported four prior full-term vaginal deliveries, the most recent 22 years earlier. Her medical history was unremarkable: she had no chronic illnesses, no history of pelvic inflammatory disease, and no prior abdominal or gynecologic surgeries. She denied any family history of gynecologic malignancy or genetic disorders. She had not undergone routine ultrasounds or formal obstetric follow-ups beyond her childbearing years. The patient's primary concern was intermittent, dull lower abdominal discomfort persisting for approximately eighteen months. She described the pain as mild to moderate, with no clear triggers or relieving factors. Over the preceding three months, she noted a gradual fullness in her left lower quadrant, which she first perceived as a "hard lump." She denied gastrointestinal symptoms (nausea, vomiting, altered bowel habits), urinary complaints, vaginal bleeding, fever, or systemic signs such as weight loss or night sweats.

Physical Examination Findings

On examination, her vital signs were within normal limits: temperature 36.8 °C, blood pressure 120/78 mmHg, pulse 78 bpm, and respiratory rate 16 breaths/min. Abdominal palpation revealed a firm, non-tender, immobile mass measuring approximately 8 cm in greatest diameter in the left lower quadrant, without overlying skin changes or signs of inflammation. Bowel sounds were normal. Pelvic bimanual examination showed a normally sized uterus and no palpable adnexal masses. There was no inguinal lymphadenopathy, and the remainder of her systemic examination was unremarkable. Approximately eighteen months before presentation, the patient first experienced sporadic lower abdominal pain. Three months prior, she detected a gradually enlarging fullness in the left lower abdomen but did not seek immediate evaluation. At the initial surgical outpatient visit, baseline laboratory tests and a physical examination prompted imaging studies. Two weeks later, plain abdominal radiography and CT imaging were performed. One week after imaging, she underwent an elective exploratory laparotomy with mass excision, followed by an uneventful recovery and six-week follow-up.

Diagnostic Assessment

Laboratory investigations demonstrated hemoglobin 12.4 g/dL, WBC 6,200/mm³, platelets 240,000/mm³, and CA-125 18 U/mL, all within normal limits. Plain abdominal radiography revealed a distinct, fetal-shaped calcified opacity in the pelvis. Contrast-enhanced CT confirmed a 7.5 × 5.0 × 4.0 cm extrauterine calcified mass displaying recognizable fetal skeletal outlines without surrounding soft-tissue enhancement. Histopathological examination of the excised specimen showed lamellar calcium deposition around degenerated fetal tissues and adjacent fibrotic maternal tissue, with no evidence of neoplasia. Our differential included a calcified uterine fibroid, which typically demonstrates whorled calcifications within the myometrium; this was excluded by the mass's extrauterine location. An ovarian dermoid cyst (mature cystic teratoma) can contain calcified elements but usually shows fat–fluid levels and teeth, neither of which were present. Mesenteric or omental cysts are fluid-filled and non-calcified, while pelvic phleboliths are multiple, small, and round, lacking fetal morphology. The imaging appearance and history were most consistent with lithopedion. The patient underwent an elective midline exploratory laparotomy twenty-one days after her

initial consultation. Intraoperatively, a hard, ossified mass adherent to the sigmoid mesentery was carefully dissected and removed intact. Perioperative management included ceftriaxone 1 g IV daily for three days and IV paracetamol 1 g every six hours for 48 hours, along with early mobilization and incentive spirometry. No intraoperative complications or transfusions were required, and the antibiotic course was shortened due to the absence of infection. She was discharged on postoperative day 5 and remained symptom-free at six-week follow-up.

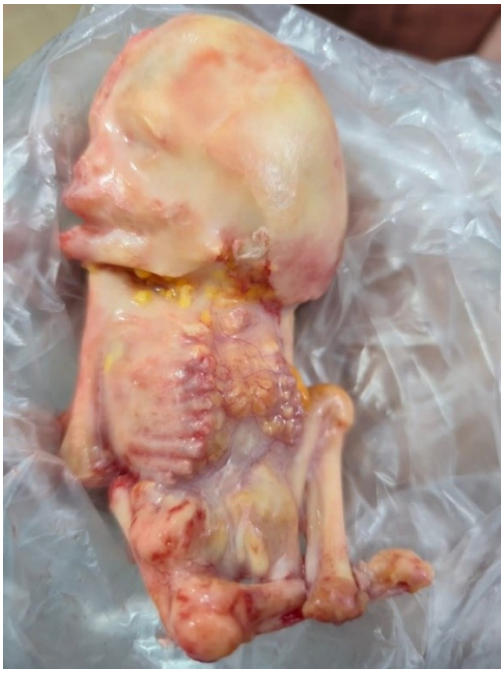

Figure 1: Gross specimen of lithopedion retrieved at laparotomy, showing the mummified fetal skull, rib cage, and long-bone outlines encased in calcified tissue.

Follow-up and Outcomes

In the immediate postoperative period, the patient demonstrated an excellent response to surgical intervention. Her abdominal pain resolved completely by postoperative Day 2, and she tolerated a regular diet without nausea or vomiting. There were no intra-abdominal collections or signs of bowel injury on serial abdominal examinations. Wound healing progressed normally, with minimal serous drainage that resolved by Day 4. The patient required only routine analgesia (paracetamol and ibuprofen) and was ambulating independently by postoperative Day 1. She was discharged home on Day 5 in stable condition, with instructions for wound care and activity as tolerated. At her six-week follow-up visit, the patient remained entirely asymptomatic. Physical examination revealed a well-healed midline incision without evidence of infection, hernia, or palpable masses. She reported returning to full daily activities, including light household chores and walking 30 minutes daily, without discomfort. Quality-of-life measures, assessed via patient self-report, indicated marked improvement in her overall sense of well-being and relief from chronic abdominal discomfort that had persisted for over a year. No significant adverse events were encountered during the perioperative or follow-up periods. The patient experienced no surgical site infections, hematoma formation, or postoperative ileus. There were no unanticipated readmissions or need for additional interventions. She did not report any new gastrointestinal, urinary, or gynecologic symptoms following the procedure.

DISCUSSION

Lithopedion is an exceptionally rare phenomenon, with fewer than 300 cases reported worldwide since Albucasis's 10th-century account.[7] Most documented cases involve women over 50 years old who harbor the calcified fetus for decades before incidental discovery during imaging or surgery.[8] Our patient, at 48 years old, falls within the lower end of the typical age

range reported (45–80 years). Unlike several cases in which patients presented with acute complications—such as small bowel obstruction or enterocutaneous fistula formation—our patient experienced only mild, intermittent discomfort and a palpable mass. Similar to the series by Ricaurte Sossa, where 60% of lithopedion cases were asymptomatic or minimally symptomatic until late in presentation, our patient's chronic, vague symptoms highlight the lesion's indolent course and potential for substantial delay in diagnosis.[9-11] The pathophysiology of lithopedion involves two critical processes: fetal demise in an extrauterine location after ossification has begun, and subsequent calcification by the maternal peritoneal defenses.[12] Fetal death beyond 12 weeks' gestation allows sufficient skeletal development; thereafter, the necrotic fetal tissues elicit a foreign-body reaction, leading to concentric deposition of calcium salts by activated macrophages and fibroblasts.[13] Histologically, this appears as layered lamellar calcification surrounding desiccated fetal remnants, akin to dystrophic calcification observed in chronic granulomatous disorders.[14] In our patient's specimen, extensive calcific layers with preserved long-bone outlines and cranial sutures corroborate this mechanism. The absence of inflammatory infiltrate or active vascularization confirms the inert, sterile nature of the lithopedion, distinguishing it from actively infective or neoplastic processes.[15]

Clinical Lessons

Several practical insights emerge from this case. First, in areas with limited access to early obstetric ultrasonography, lithopedion should be considered in any multiparous or peri-menopausal woman presenting with a long-standing calcified abdominal mass.[16] Plain radiographs can provide an initial "red flag" by depicting fetal skeletal silhouettes, but computed tomography (CT) or magnetic resonance imaging (MRI) is essential for confirming extrauterine location, assessing adhesions, and planning removal.[17] Second, elective surgical excision via laparotomy remains the gold standard: it provides definitive diagnosis, resolves symptoms, and precludes rare but serious sequelae such as intestinal obstruction or chronic inflammatory pseudotumor formation.[18] Laparoscopic approaches have been described in select cases, but dense adhesions and mass size often preclude minimally invasive techniques.[19] Third, multidisciplinary collaboration—between surgeons, radiologists, and pathologists—ensures accurate differentiation from mimics such as mature cystic teratoma, calcified leiomyoma, or mesenteric cyst, all of which require distinct management strategies.

Limitations

This report's primary limitation is its single-case design, which limits generalizability. Our lack of preoperative MRI represents another constraint; MRI could have better characterized soft-tissue interfaces and potentially guided a less invasive approach. Additionally, patient recall regarding obstetric history was imprecise, preventing an exact determination of the latency period between fetal demise and diagnosis. Finally, our follow-up period of six weeks does not capture long-term outcomes such as potential hernia development at the laparotomy site or late adhesion-related complications. Prospective case series with standardized imaging protocols and extended follow-up would more robustly define best practices for management and surveillance of lithopedion.

CONCLUSION

This case highlights the critical need to consider lithopedion in the differential diagnosis of calcified abdominal masses in multiparous or peri-menopausal women, particularly in regions with limited access to early obstetric imaging. Cross-sectional imaging and multidisciplinary collaboration facilitate accurate identification and safe surgical removal, alleviating chronic symptoms and preventing potential complications. Although rare, awareness of this entity remains essential for surgeons, radiologists, and pathologists to ensure timely intervention and optimize patient outcomes and long-term monitoring.

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