



LITHOPEDION AS A RESULT OF FAILURE OF TUBECTOMY: REPORT OF A RARE CASE

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ABSTRACT

The word lithopedion (stone child) is a descriptive term derived from the Greek words *litho* (meaning stone), and *pedion* (meaning child). It usually results from a primary or secondary abdominal pregnancy that evolves to fetal death and calcification. The incidence of abdominal pregnancy is 1:11,000 pregnancies and lithopedion occurs in 1.5 to 1.8% of these cases. This is a rare condition with about 300 cases reported in 400 years of medical literature.^[1,2,3] Most cases of lithopedion are asymptomatic and discovered incidentally on abdominal x-ray, at surgery, or autopsy. Because of increase in inflammatory pelvic disease and surgery of uterine tubes, there has been an increase in ectopic pregnancy. On the other hand, occurrence of abdominal pregnancy and lithopaedion has tended to become even rarer due to medical and pre-natal care becoming more accessible to the population, with the possibility of early diagnosis and treatment of the pathology.^[3,4] We report a case of a 40 year old lady who underwent tubectomy 10 years back and presented with pain in right lower abdomen for 3 years. Plain X-ray suggested a heterogenous irregular mass in Right iliac fossa which on laparotomy turned out to be a lithopedion. The Right fallopian tube of the patient laid transected and with patent lumen suggesting a failed tubectomy.

KEYWORDS: Lithopedion, ectopic pregnancy, abdominal pregnancy, tubectomy.

INTRODUCTION

A lithopedion is a very rare obstetric phenomenon where the contents of an abdominal pregnancy calcify and become preserved.^[5] If the dead fetus is too large to be re-absorbed by the mother's body it is treated as a foreign body by the mother's immune system. To protect from possible infection, the mother's body encases the fetus in a calciferous substance thus forming a mummified stone baby. Lithopedion may occur from 14 weeks' gestation to full term. It is not unusual for a stone baby to remain undiagnosed for decades.^[6] The earliest known case of Lithopedion was discovered in 1582, at the autopsy of a 68-year-old woman in the French city of Sens and described in a thesis by the physician Jean d'Ailleboust. The woman had carried her lithopedion for 28 years.^[7]

CASE REPORT

We report a case of a 40 year old lady who presented with chronic non-radiating dull aching pain and a lump in right lower abdomen for 3 years. She had two living issues, both of whom were delivered normally. She had undergone tubectomy 10 years back. She gave a history of an episode of 4 month-amenorrhoea 3 years ago which was not associated with notable abdominal distension. She did not remember of having secondary changes of

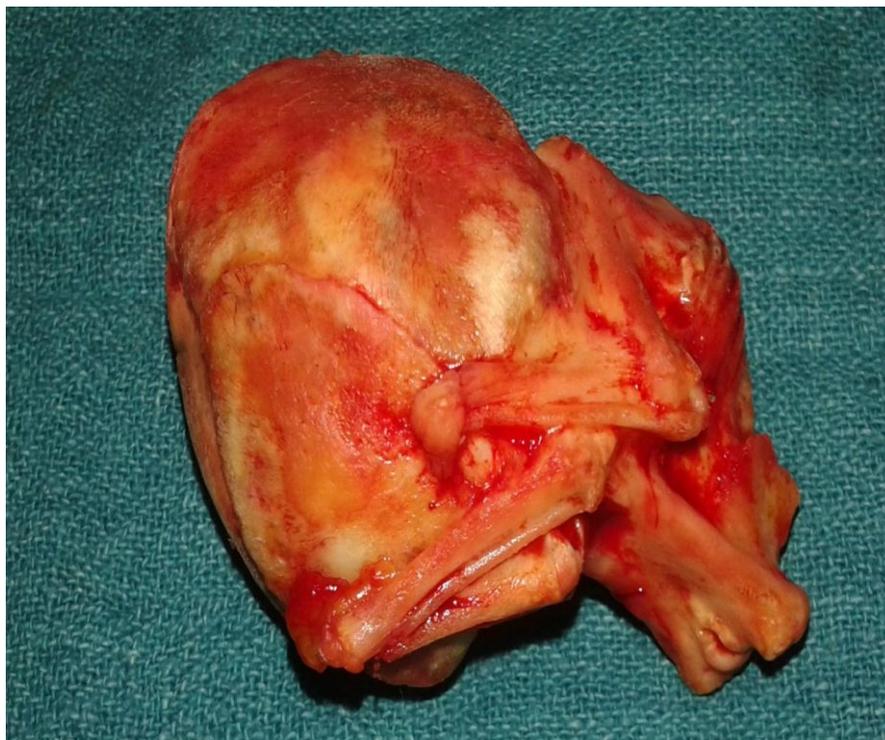
pregnancy during that episode. The episode of amenorrhoea ended with par vaginal passage of thick blackish red blood after which she started having regular menstruation. The whole episode was uninvestigated, unreported to any healthcare personnel and unsubjected to ante-natal care. On examination, a 5x5 cm hard, tender lump was palpable in RIF which was movable in all directions. Rest of the abdomen had no mentionable abnormal finding. Par vaginal examination did not yield any significant finding. Plain X-ray suggested a heterogenous irregular mass in Right iliac fossa. USG suggested calcified mesenteric lymphadenitis. CT scan or MRI could not be done due to financial constraints. Exploratory laparotomy was planned to address the diagnostic dilemma and to deal with the lump.

Transverse incision over Right iliac fossa was made to open the abdomen in layers and right iliac fossa was approached and omentum which was covering the whole lump was dissected free. Terminal ileum, cecum and appendix were essentially normal. The Right fallopian tube laid transected and with patent lumen suggesting failed tubectomy. A heterogenous calcified mass was found lying in the Right iliac fossa covered with thin flimsy adhesions. The adhesions were lysed with a combination of sharp and blunt dissections and the mass

was extracted out. It was found to be a lithopedion of about 4 month duration. It was in flexed attitude and measured about 9x5x5 cm with a femoral length of 2.3 cm and a weight of about 150 gm. It had well-formed head, spine and all limbs.

Abdomen was re-examined for any associated pathology and then closed in layers. Post-operative recovery was uneventful and the patient was discharged after 5 days.





DISCUSSION

Abdominal pregnancies are rare and usually result secondary to tubal rupture or tubal abortion.^[2,4] The age of the patients on the date of diagnosis varies from 23 to 100 years, two third of them being over 40 years old. The period of fetus retention may vary from four to sixty years. Fetal death occurs between three and six months of pregnancy in 20% of cases, between seven and eight months in 27% and at full term in 43% of the cases.^[1,3] Diagnosis is made by a suggestive clinical history, a pelvic mass found during the physical examination and a radiograph of the abdomen.^[2,3] Ultrasound shows empty uterine cavity and non-specific abdominal mass and is often not fruitful.^[1] CT scan and MRI, though have a high detection rate, are often not required.^[1,2,3] Excretory urography and barium enema radiograph may be needed to evaluate compression or alterations in organs or systems close to it. If the pregnancy reaches advanced stages, it is associated with high morbidity and mortality.^[8] Abdominal pregnancies have complex course and unpredictable outcome and the need to avoid intraabdominal placental separation and hemorrhage makes decision making in its management challenging.^[2]

D'Aunoy and King listed four changes which an abdominal fetus may undergo if it is not removed:

- (I) **Skeletonization**, where only the bones of the foetus remain following the disintegration and absorption of the soft parts.
- (II) **Adipocere**, where the soft parts are replaced by fatty acids, soaps and salts of palmitic and stearic acids.
- (IV) **Suppuration**, where the foetus is destroyed after an abscess has formed, usually due to *E. coli* infection.

(IV) **True lithopedion** formation occurs if the foetus remains sterile and to varying degrees becomes infiltrated with calcium salts.^[9]

German physician Friedrich Kuchenmeister identified three subgroups:

- 1) **Lithokelyphos (“Stone Sheath”)**, where calcification occurs on the fetal membranes and not the fetus and the fetus degenerates within them.
- 2) **Lithotecnon (“Stone Son”) or “true” lithopedion**, where the fetus itself is calcified after entering the abdominal cavity, following the rupture of the fetal membranes. (No calcification of the membranes).
- 3.) **Lithokelyphopedion (“Stone Sheath and Child”)**, when both fetus and membranes are calcified.^[10]

In certain cases, it may present with certain abdominal complications such as volvulus of the cecum^[11], intestinal obstruction^[12] and abscess formation.^[13]

Abdominal pregnancy is exceedingly rare. In view of the potential complications and associated morbidity and mortality, it is prudent to go for operative intervention as soon as a diagnosis is made.^[14]

CONCLUSION

Lithopedion is a harsh reminder of poor ante-natal checkup or a serious mistake in medical judgement. It needs a high level of clinical suspicion apart from a thorough history and proper clinical examination and often advanced and accurate imaging or even laparotomy for it definitive diagnosis. In our case, the cause seems to be a failure of tubectomy.

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