

## LITHOPOEDION

BY

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The word lithopoedion is derived from the Greek *Lithos* meaning stone and *Paidion* meaning child to designate a foetus that has become stony. Except in those cases where the classical signs and symptoms are obtainable, the majority of cases of lithopoedion have been discovered at laparotomies for unassociated conditions, during routine X-ray of the abdomen or at autopsy.

Owing to advances in diagnosis and surgery and patients seeking medical aid earlier, the number of cases of lithopoedion is getting rare. It is the rarity of the condition that has prompted me to report this case.

Patient A, aged 22 years, was first admitted into this hospital on 31st May 1951 with a history of ten months' amenorrhoea and slight vaginal bleeding and abdominal pain. She was a primipara in good health, pregnant forty weeks, and all through her pregnancy she had kept good health. Obstetric examination revealed that she was full term, the foetus was lying obliquely with the head in the right iliac fossa. Foetal heart sounds audible, blood pressure 120/80. Urine no albumen. Radio-

logical examination:—Foetus presenting by the shoulder—oblique lie. Head in the right iliac fossa. Gynaecoid pelvis of normal capacity. In spite of advice to the contrary the patient left the hospital on 6th June 51, the slight bleeding and pain having stopped meanwhile.

She was readmitted into hospital on 17th February 1954 (two years, eight months and eleven days later) for severe pain in the lower abdomen of one month's duration. The following relevant facts were elicited:— Since her discharge from the hospital on 6-6-51 she continued to keep good health and she had no further attacks of pain or vaginal bleeding for which she had first sought admission. She, however, did not give birth to the baby. A month after her return home, she began to menstruate regularly, the flow lasting three to four days. Her abdomen however continued to be big, but did not grow in size. She continued to menstruate regularly every month till October '53, when the periods stopped. Early in January '54, she started bleeding per vaginam. The bleeding was rather heavy for about four days and then

gradually stopped about the tenth day. Meanwhile her abdomen started getting bigger and very painful. The pain was of a dull aching nature with occasional acute exacerbations. Along with the onset of pain, she developed fever and cough. It was with this history that she was readmitted into hospital on 17-2-54.

Condition on examination:—Patient was emaciated and looked very ill and anaemic. Temperature 102°.4F; pulse 140; respiration 26. Rales and rhonchi heard over both lungs. Hb. 40 per cent.

Abdomen:—Inspection revealed a swelling extending upwards from the pelvis to about two inches below the xiphisternum. Laterally, the swelling extended into the right hypochondriac and lumbar regions and on the left to the left umbilical region. On palpation, the upper part of the swelling was found to be very hard, while below the umbilicus it was tense, cystic and resonant on percussion. The swelling was tender on palpation and its mobility was restricted. There was no ascites.

Vaginal examination:—The cervix was found to be drawn up and the whole swelling seemed to be closely adherent to the uterus. The body of the uterus could not be made out separately. Rectal examination confirmed the vaginal findings.

A plain X-ray of the abdomen showed a dead foetus with marked Spalding's sign, in a bizarre position situated high up and rolled up on itself. It was very suggestive of extra-uterine gestation. A large amount of gas was seen in the abdomen below the foetus, rather circumscribed and with a dense shadow in-

side it. Calcified or fibrosed placenta.

Based on these findings, a diagnosis of extra-uterine pregnancy with infection was made. She was treated with antibiotics and blood transfusion. She responded remarkably well and within a week, the acute symptoms had disappeared, the temperature returned to normal and her general condition improved. The swelling also was found reduced slightly in size and the cystic resonant mass found on admission was no longer present. Only the hard rolled-up foetus was palpable.

The male frog test done on 25-2-54 was negative. A hysterosalpingogram done on 26-2-54 revealed a normal sized uterus. The right tube was visualised but not the left. The foetus was seen lying outside the uterine cavity and there was peritoneal spill in the twenty-four hour picture.

On 4-3-54 laparotomy was done under heavy spinal anaesthesia. The omentum was found adherent to the anterior abdominal wall dipping down into the pelvis and getting adherent to the uterus and bladder. On separating the adhesions, the deformed and distorted foetus was found lying free in the peritoneal cavity, with a fair number of adhesions to the omentum and to the top of the uterus. These adhesions were separated and the foetus easily removed. There was no sign of the umbilical cord or the placenta. But in the region of the left broad ligament, there was a small cavity about 2" in diameter lined by dense fibrous tissue from which a small amount of pus escaped. These were most probably

the remnants of the organised placenta, which had got infected, perhaps with gas-forming organisms, and gave rise to the acute symptoms, and resonant tense swelling in the hypogastrium found on admission. The cavity was mopped free of pus and no attempt was made to excise this area. The uterus, right tube and ovary were found to be normal. The left tube and ovary could not be visualised. The abdomen was closed after putting in penicillin. The patient made an uneventful recovery and went home three weeks later.

Specimen: Deformed distorted calcified foetus—Typical lithopoedion.

In 1881 Kuchenmeister published his classic article on lithopoedion. He noted that the calcification may involve either the foetus, membranes or the placenta, or a combination of these structures. Accordingly he proposed the following classification:

1. *Lithokelyphos*:—(stone sheath or egg shell) in which the membranes alone are calcified and form a hard shell surrounding the foetus. The foetus may undergo slight changes only or may be completely skeletonised but is not involved in the process of calcification.

2. *Lithokelyphopoedion*:— (stone sheath child) in which both the membranes and the child are calcified.

3. *True lithopoedion*:— (stone child)—in which the foetus is infiltrated with calcium salts and calcification of the membranes is negligible.

According to Lee and Oden the following conditions are necessary for the development of a lithopoedion: (1) The pregnancy must be extra-

uterine. (2) The foetus must survive in the abdomen for more than three months (otherwise it will be absorbed). (3) The condition must escape medical notice as otherwise operation removes the foetus before lithopoedion formation. (4) The foetus must remain sterile. (5) The necessary condition for the deposition of calcium must be present, namely sluggish circulation.

In reviewing the literature, one is impressed with the paucity of reported cases. Schrenk, quoted by Schumann, in 1895 gave the incidence of lithopoedion formation as 1.8%; Bainbridge at 1.5% and Masson and Simon at 2%. In 1939 Mathieu reviewed a total of 229 cases reported in the literature. Reeves and Lipmann brought the reported total in 1941 to approximately 236 covering five centuries. At the time of their publication 247 cases had been reported. Mathieu's summary showed the age of the patients to range from 30 to 100 years with a period of retention from four to sixty years.

The diagnosis of a lithopoedion is dependent on a careful clinical history. The physical findings may be the finding of a hard mass in the abdomen. Radiology demonstrates a bizarre calcified foetus in an entirely unnatural position. Hysterosalpingography demonstrates the normal size of the uterine cavity, and the foetus outside it.

In this case no history of a rupture of an extra-uterine gestation was obtainable. Even so, the pregnancy could be considered only as a secondary abdominal as the left tube and ovary could not be visualised at laparotomy. The patient sought ad-

mission on account of the acute symptoms produced by infection of the fibrosed placenta. The diagnosis was made by X-ray of the abdomen and hysterosalpingography confirmed it.

### Summary

A case of lithopoedian formation is reported because of the rarity of the condition.

A brief review of the available literature is also given.

### References

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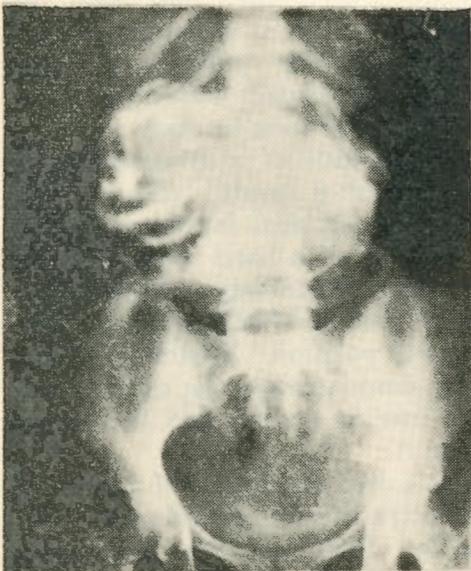


Fig. 1: X-ray photograph taken at the time of admission on 17-2-54. Note the bizarre position of the foetus and the circumscribed dark shadow below.

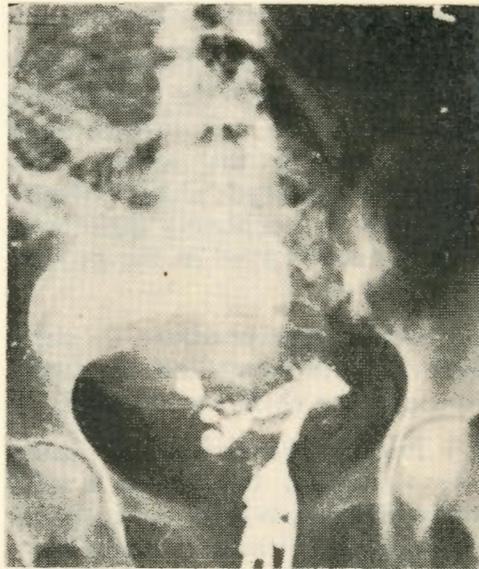


Fig. 2: Hysterosalpingogram done on 26-2-54.



Fig. 3. Lithopedion removed at operation.