International Journal of Reproduction, Contraception, Obstetrics and Gynecology
Huchappa AS et al. Int J Reprod Contracept Obstet Gynecol. 2024 Jun;13(6):1603-1605
www.ijrcog.org
pISSN 2320-1770 | eISSN 2320-1789

DOI: https://dx.doi.org/10.18203/2320-1770.ijrcog20241457

Case Report

Lithopedion: the calcified marvel

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Received: 09 April 2024
Revised: 19 May 2024
Accepted: 20 May 2024

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ABSTRACT

The term lithopedion was derived from the Greek words Lithos and Pedion. It is a rare ectopic pregnancy with incidence as low as 1.5-2.0% of all ectopics. An 80-year old female patient presented to the orthopaedic out-patient department with complaints of lower back pain and mild lower abdominal pain, no history of any trauma. The patient was a known case of Ttype II diabetes and hypertension on medication, no other comorbidities. The patient was referred to the department of radio-diagnosis, for plain radiograph of the lumbo-sacral spine, antero-posterior and lateral view for further evaluation. The plain radiograph revealed a well-defined oval shaped radio-density in the pelvis more towards the right side. Further evaluation was done in the form of ultrasound abdomen and computed tomography. Computed tomography revealed a mummified fetus which is in close proximity to the internal organs and adhering to bowel loop. Low socioeconomic status combined with lack of education of the population are the primary causes for delay in diagnosis resulting in undiagnosed ectopic pregnancy and its later transformation into a Lithopedion.

Keywords: Lithopedion, Stone child, Stone baby, Lithkelyphos, Lithokelyphopedion, Ectopic pregnancy

INTRODUCTION

The term lithopedion was derived from the Greek words ‘Lithos’ and ‘Pedion’ (Lithos meaning rock and Pedion meaning child)- stone child.[1]

An ectopic pregnancy that remains unnoticed and forgotten, that evolves to fetal death and later calcification. It is a rare occurrence with incidence as low as 1.5-2.0% of all ectopic pregnancies (ectopic pregnancies being only 0.1-0.3% of all pregnancies).[2] Only 350 cases of Lithopedion have been reported.[3]

First described by Albucasis, a Spanish-Arabian physician and Surgeon in the 10th Century.[1] The Lithopedion can remain asymptomatic for many years and most cases are an incidental finding when the patients present with abdomino-pelvic pain, mass per abdomen or incontinence and constipation and get evaluated for the same.

The suspicion of a Lithopedion arises on a simple clinical examination and an abdominal x-ray in itself can lead to a definitive diagnosis.

CASE REPROT

An 80-year-old female patient presented to the orthopaedic out-patient department with complaints of lower back pain and mild lower abdominal pain. She did not have any history of fall, trauma to the back or lifting heavy weights. The patient was a known case of type II diabetes and hypertension on medication, no other comorbidities. The patient was referred to the department of radio-diagnosis, for plain radiograph of the lumbo-sacral spine, antero-posterior and lateral view for further evaluation.

The plain radiograph (Figure 1) revealed a well-defined oval shaped radio-density in the pelvis more towards the right side.

On taking a detailed history of the patient, the patient revealed that 10 years back, she was diagnosed with a mass in her abdomen and was told that surgical resection was not possible as the mass was adhered to the bowel. Furthermore, exact operative details were not available. The patient has two children and did not conceive for a third time to her knowledge. The patient was further evaluated with ultrasound and computed tomography. The ultrasound of abdomen and pelvis (Figures 2) revealed a well-defined hypoechoic lesion with significant posterior acoustic shadowing.

Computed tomography (Figures 3-5) revealed a mummified fetus with its anatomy depicted in detail. The mass is noted in close proximity to the internal organs, adhering to bowel loop, approximately measuring 4.6×7.5×6.6 cm (AP×TR×CC) with an approximate femur length of 3.25 cm, corresponding to an estimated gestational age of 20 weeks and 1 day.

Figure 1: Plain radiograph of the lumbo-sacral spine AP and lateral views revealed a large calcified irregular heterogeneous density mass with bony structures.

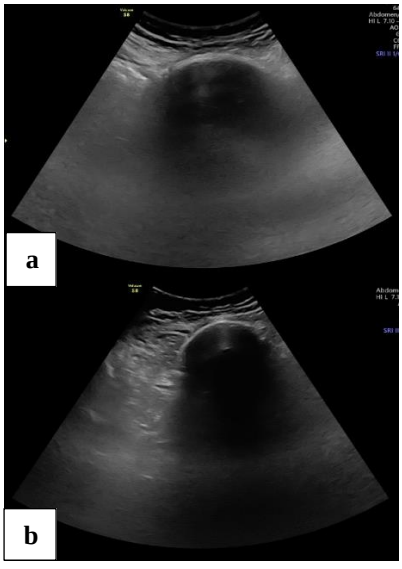

Figure 2 (a and b): Ultrasound pelvis reveals: a well-defined hypoechoic lesion with hyperechoic margin and significant posterior acoustic shadowing.

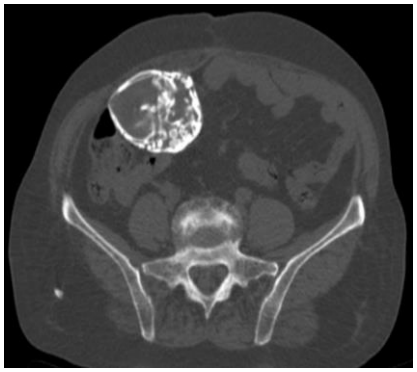

Figure 3: Plain CT axial section reveals: a well-defined calcified ovoid lesion, suggestive of a mummified fetus with detailed anatomy.

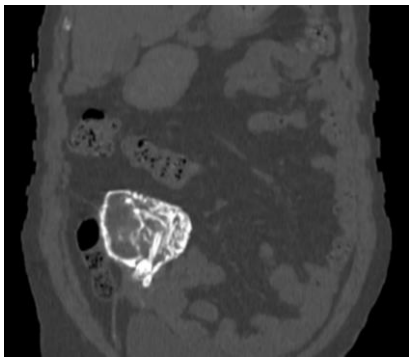

Figure 4: Plain CT coronal section reveals: a well-defined calcified ovoid lesion, suggestive of a mummified fetus with detailed anatomy.

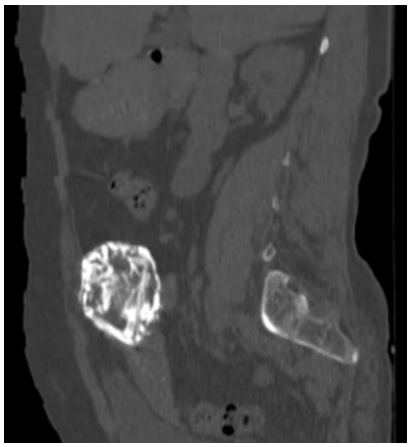

Figure 5: Plain CT sagittal section reveals: a well-defined calcified ovoid lesion, suggestive of a mummified fetus with detailed anatomy.

DISCUSSION

Abdominal pregnancies results from the rupture of an ovarian or tubal pregnancy which leads to implantation in the abdominal cavity.[2] The patient ages may vary between 30 and 100 years at the time of presentation and diagnosis with lithopedion retention duration ranging from 4 to 60

years.[4] Factors associated with pathogenesis are a sterile foetus, sluggish local blood circulation and conditions favourable for calcium deposition.[4] Lithopedion was classified into three distinct types by Kuchenmeister (1) lithkelyphos (egg shell): only the membranes are calcified forming a hard outer sell surrounding fetus. Fetus is not involved in the process of calcification; (2) lithokelyphopedion (stone sheath child): both membranes and fetus are calcified; and (3) true lithopedion (stone child): fetus is infiltrated with calcium salts with negligible membrane calcification.[1]

Differential diagnosis mainly consists of other calcified abdomino-pelvic mass, namely appendicolith, dermoid cyst, foreign material, leiomyoma or leiomyosarcoma of uterus, lithopedion, lymph node, urinary tract calculus, fallopian tube calcification, vascular (arteries, phleboliths).[5]

Reported complications associated with Lithopedion include: post-traumatic intestinal perforation, intestinal obstruction, fistulisation of fetal parts in abdominal wall, rectum or vagina, pelvic abscess.[6]

In the recent years, Lithopedion has become a rare entity due to access to improved prenatal consultations and imaging modalities which leads to early diagnosis and treatment.

Low socio-economic status combined with lack of education of the population is the primary cause for delay in diagnosis resulting in non-diagnosis of ectopic pregnancy and later transformation into a Lithopedion.

The prevalence of lithopedion is a harsh reminder of the poor antenatal care which is still prevailing in some parts of a developing country.

CONCLUSION

The patients belong to a low socioeconomic status which when combined with lack of education forms the primary cause for delay in diagnosis which in time results in an undiagnosed ectopic pregnancy and its later progression into a Lithopedion. The prevalence of lithopedion is a harsh reminder of the poor antenatal care which is still prevailing in some parts of developing countries. Computed tomography still remains the cornerstone in diagnosis as it delineates the anatomy and confirms the diagnosis. The case report brings to light the importance of keeping an open mind in keeping Lithopedion as a differential diagnosis in a solitary calcified mass in the pelvis.

ACKNOWLEDGEMENTS

I would like to acknowledge Mr. Gururaj K. Deshpande, Senior technician in our institute for his technical expertise in the case and image acquisition.

Funding: No funding sources
Conflict of interest: None declared
Ethical approval: Not required

REFERENCES

1. Kumar PCN, Sowmya J, Manupratap N, Rajendrakumar NL, Nanjaraj CP, Sushma H, Raksha AR, et al. Lithopedion- a rock baby. J Gastrointest Abd Radiol. 2020;3:S65-7.
2. Mirzaei S, Arab Baferani S, Khoshkholgh Sima M, Rahmatian R. Lithopedion - a rare complication of ectopic pregnancy: A case report. Radiol Case Rep. 2023;18(11):3853-5.
3. Gueye C, Niang I, Sano O, Toure M, Faye ST, Talhaoui K, Deme H. Case report of a lithopedion of tubal location, in a young woman. Radiol Case Rep. 2023;18(4):1552-5.
4. Morales A, Aguilera G, Krause D. Lithopedion: An unusual cause of an abdominal calcified mass. Indian J Radiol Imaging. 2020;30(2):244-5.
5. Kaeser MA, McDonald JK, Kettner NW. A calcific pelvic mass in a woman with chronic spinal pain: a case of mature cystic teratoma. J Chiropr Med. 2011;10(4):327-32.
6. Alymlahi EK, Chat L, Chellaoui M, Dafiri R. Lithopedion: stone baby. Eurorad. 2003;2439.

Cite this article as: Huchappa AS, Raghuveer K, Suresh A. Lithopedion: the calcified marvel. Int J Reprod Contracept Obstet Gynecol 2024;13:1603-5.