



A RARE CASE OF PSEUDO-PERITONEAL INCLUSION CYST : A CASE REPORT

Obstetrics & Gynaecology

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ABSTRACT

Peritoneal inclusion cysts are benign multilocular cysts consisting of fluid localized between intraperitoneal adhesions. Usually presenting in women in the third and fourth decades of life with a history of prior pelvic or abdominal surgery, especially months to 20 years ago. They have low mortality and the potential for high morbidity. Transvaginal ultrasound with colour doppler plays an important role in the differential diagnosis of these. Treatment depends on the patient's condition, symptoms, other diseases, and desire for procreation. Among other contemplated are hormonal oral contraceptive pills, an ultrasound guided aspiration, minimally invasive or open surgery.

KEYWORDS

Peritoneal cysts; entrapped fluid; infertility; adnexal masses; adhesions

INTRODUCTION

Peritoneal pseudocysts or peritoneal inclusion cysts are a type of cyst-like structure that appears in relation to the peritoneal surfaces and results from a non-neoplastic reactive cuboidal or flattened mesothelial proliferation. They are complex cystic adnexal masses consisting of a normal ovary entrapped in multiple fluid-filled adhesions. They usually develop in women of reproductive age who have a history of previous pelvic surgery or pelvic infection. The primary modality of treatment is a conservative approach. Surgical options include : Trans-vaginal fluid aspiration, Laparoscopic drainage, open resection or percutaneous drainage. Statistics show that PICs occur only after 2% to 6% of gynaecologic operations, compared to 17% of male patients with an extensive surgical history.⁸

Case Report

A 26-year-old woman, married since 9 years, nulligravida presented to our clinic with primary infertility. Laboratory investigations included an Anti-Mullerian hormone level which was 3ng/dl. Semen analysis report was suggestive of count of 20million/ml with motility (Grade III and IV) of 40% (WHO 2021). Her hystero-laparoscopy done 3 years ago was suggestive of frozen pelvis with bilateral absent spill. And histopathological report was suggestive of genital Koch's. Anti-Koch's treatment was given for 9 months. Transvaginal ultrasound done was suggestive of Antral follicular count of 5 in the right ovary and 10 in the left ovary. Transvaginal ultrasound in addition showed a large loculated fluid collection of multiple echoes with septations ~ 12.6 x 9.7 x 6.1 cm in pelvis which was an incidental finding [Fig1] Radiologist confirmed the ultrasound finding of transudate fluid collection in pouch of Douglas with bilateral ovaries floating in the fluid with a diagnosis of peritoneal pseudocyst.

The couple was counselled for need for aspiration of fluid in order to access the ovaries at a later date for oocyte retrieval after a diagnosis was made. The possible risks of procedure were also explained to the couple. After written valid, informed, consent, a transvaginal ultrasound guided fluid aspiration was done [Fig2]. The fluid tapped was straw coloured; sent for TB-PCR which was negative [Fig3]. Cytology report was suggestive of predominant macrophages and reactive mesothelial cells.

Culture and sensitivity report showed Klebsiella pneumoniae and Escherichia Coli for which patient was kept on higher antibiotics for a period of 10 days. One month later a transvaginal oocyte retrieval was done during which bilateral ovaries were now freely accessible. We retrieved 12 oocytes of which day 3, 8 cell Grade A embryos were cryopreserved. Following this, a frozen embryo transfer cycle was performed and the couple had a successful pregnancy outcome and delivered a healthy child normally at term.



Fig 1 : Ovary floating in the fluid



Fig2:-Post caesarean section image

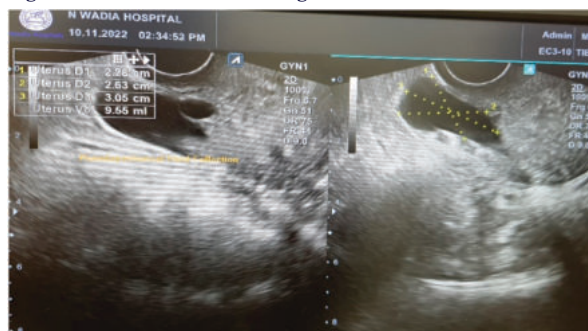


Fig3: Caesarean scar with pseudoperitoneal fluid collection



Fig 4 : Post Fluid Aspiration scan showing significant decrease in volume

DISCUSSION

Peritoneal inclusion cysts are uncommon abdominopelvic cysts seen in perimenopausal women. It is often misdiagnosed clinically as an ovarian tumour due to similar presentation and mimicking findings on radiology. It occurs almost exclusively in premenopausal women with a history of previous abdominal or pelvic surgery, trauma, pelvic inflammatory disease, endometriosis, or inflammatory bowel disease as the absorptive capacity of the peritoneum is greatly diminished. Peritoneal inclusion cysts range in size from several millimetres in diameter to bulky masses that may fill the entire pelvis and abdomen. The development of a peritoneal inclusion cyst depends on the presence of an active ovary and peritoneal adhesions.³ They are usually caused by the accumulation of ovarian fluid that is contained by a peritoneal adhesion. Pathological studies have shown that peritoneal inclusion cysts are adherent to surface of the ovaries but do not involve the normal ovarian parenchyma.⁷ They tend to grow slowly as more fluid is secreted by ovaries and not reabsorbed by peritoneum. The ultrasound features of peritoneal inclusion cysts include: a large, ovoid or irregular anechoic fluid collection. Its sizes can vary from small localized collection up to large cystic masses which occupies the entire pelvis and lower abdomen. It has a characteristic spider web pattern due to its entrapped ovaries. In addition, it has lack of discrete limiting wall, minimal internal debris, and no mural nodularity. MRI may be used as diagnostic investigation. If septated they may mimic either a malignant cystic ovarian neoplasm or multicystic mesothelioma or malignant Ovarian Neoplasm¹ or paraovarian cyst². The correct clinical diagnosis of peritoneal inclusion cysts is useful in planning further line of management.

The choice of treatment remains controversial between medical and surgical interventions. Because these cysts do not have malignant potential, a conservative approach is usually recommended. The primary modality of treatment is a conservative approach. Conservative treatment includes the use of oral contraceptives to suppress ovulation, thus decreasing the formation of ovarian fluid trapped by adhesions.⁵ The use of intermittent pain medications in combination with oral contraceptive therapy is a common initial approach to treatment. Because of continued pain and distension many patients choose definitive treatment. Peritoneal inclusion cysts can cause infertility and surgery is often used in this group of patients. Surgical options include: Trans-vaginal fluid aspiration, Laparoscopic drainage, open resection or percutaneous drainage. After surgical resection, the risk of recurrence is 30-50%.⁶

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