

Spontaneous Ruptured Pyometra: A Gynaecological Emergency

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Abstract

Pyometra is a condition characterized by the accumulation of pus within the uterine cavity that usually develops in elderly women. Spontaneous rupture of pyometra causing diffuse peritonitis is very rare. Unless recognized in time it can be a life threatening condition. The aim of this article is to report a case of spontaneous rupture of pyometra who was admitted in our hospital as surgical emergency and was successfully treated by surgery.

Key words: Pyometra, Spontaneous Rupture, Emergency surgery

Introduction:

An uncommon condition known as pyometra occurs when the natural drainage mechanism of the uterine cavity is compromised and pus accumulates within the uterine cavity. Reported incidence varies from 0.5% in young patient to 13.6% in elderly patients attending gynaecological clinic¹ A spontaneous rupture of pyometra is even rare condition. Here we report a patient who was admitted with features of perforation of hollow viscous and subsequently diagnosed as a case of spontaneous rupture of pyometra.

Case summary:

A 75 years- old post-menopausal lady reported at casualty department with severe lower abdominal pain for 2 days and fever for 10 days. She gave prior history of feeling of a lump in her lower abdomen for 1 year. There was no past history of excessive per vaginal discharge or post-menopausal bleeding. She had no past history of insertion or missing of cu-T, malignancy or surgery in the genital tract or radiation to the pelvis. She is para 4, all delivered vaginally. On clinical examination patient was found ill looking, tachypnoic (RR 28 /mm). Her temp was 101 ° F, pulse rate 110 beats /minute and BP was 100 /60 mm (Hg). Her abdomen was distended, tense and tender. An irregular cystic mass corresponding to 18 weeks pregnancy size was palpated in lower abdomen. Bowel sound was absent. Pelvic examination revealed senile changes in the vulva and vagina. Cervix was normal according to her age.

The laboratory findings were, White Blood Cell count 21.1×10^3 per mm^3 with 91 % Neutrophils, Haemoglobin 11.5 gm/dl, CA 125 was 34.7 lu/ml, CA 19-9 -7.2lu/ml, α -fetoprotein 0.45 /ml, LDH – 38 IU / ml, Serum urea 28 mg/dl, Creatinin 0.7 mg/dl, USG of abdomen revealed a cystic mass in the pelvis measuring (9.6 × 7.3) cm but uterus and adnexa could not be visualized separately (fig. 1). Chest X-Ray showed crescentic shaped free air under the diaphragm on right side (fig. 2).



Fig.-1: USG of abdomen showed a cystic mass in the pelvis (Lf)

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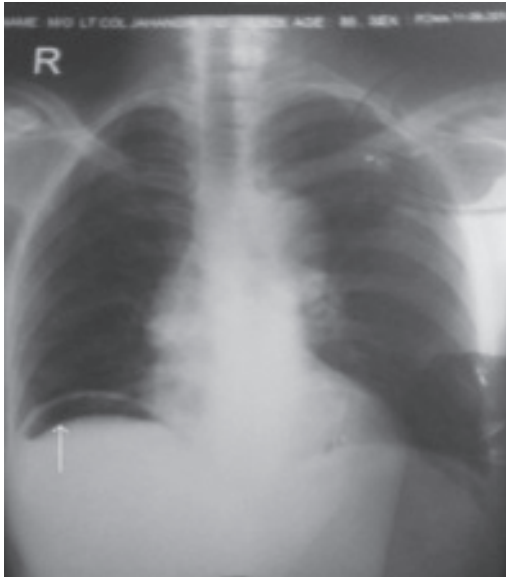


Fig.-2: Chest X-Ray showed free air under the diaphragm (Rt)

Contrast enhanced computed tomography (CT) showed multiple pockets of pelvic and intra-abdominal fluid collection and a cystic pelvic mass with free sub diaphragmatic intraperitoneal air (Fig.3) She was diagnosed as a case of perforation of hollow viscous. Thus after prompt resuscitation and under intravenous antibiotic coverage emergency explorative laparotomy was performed under general anesthesia. Peritoneal cavity was found full of pus. On exploration of the pelvic cavity it was found that uterus was soft and enlarged about 18 weeks pregnancy size with a perforation of about 1 cm in diameter at the fundus, through which frank pus was coming out (Fig. 4).

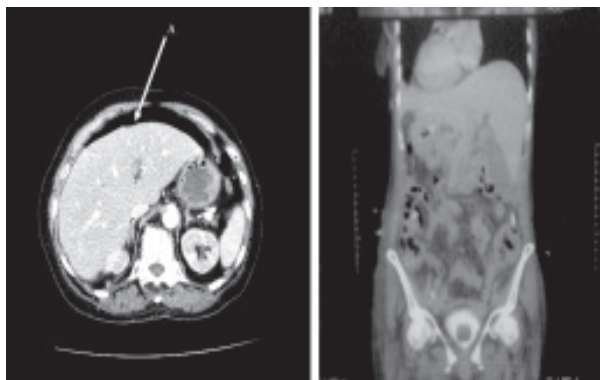


Fig.-3: Contrast enhanced computed tomography (CT) showed multiple pelvic and intra-abdominal fluid collection and a cystic pelvic mass with free sub diaphragmatic intraperitoneal air.

Ovaries were found atrophic. Fallopian tubes, round ligaments and broad ligaments were found inflamed, oedematous, sample of pus was taken for culture sensitivity test. Total abdominal hysterectomy with bilateral salpingo-oophorectomy followed by thorough peritoneal lavage was performed. Specimen sent for histopathological examination (Fig. 5). Patient could not maintain blood pressure and reversal was difficult, so she was not extubated and was kept on ventilator.

She was nursed in critical care unit with all supports. Postoperatively patient was on Inj. Meropenem 1 gm I/V 8 hourly, Inj. Metronidazole 500 mg I/V 8 hourly. Initially she was hypotensive and hypokalemic. Her BP was maintained by inotropic support and hypokalemia got corrected. Extubation done on 1st postoperative day, but on 3rd postoperative day, patient developed severe respiratory distress and could not maintain her O₂ saturation even with NIV. Chest X-Ray revealed consolidation. Thus she needed reintubation for bronchoscopic lavage and again put on ventilator. According to the culture sensitivity report of lavage inj. vancomycin was added from 4th postoperative day. On 5th postoperative day as her lung condition improved patient was extubated. Histopathological examination revealed pyometra with no evidence of malignancy. Oral feeding was started from 6th postoperative day. Patient was transferred to the gynecology unit on 8th postoperative day. Her wound was completely healed. As she had no other complications, she was discharged on the 13th postoperative day in good condition.

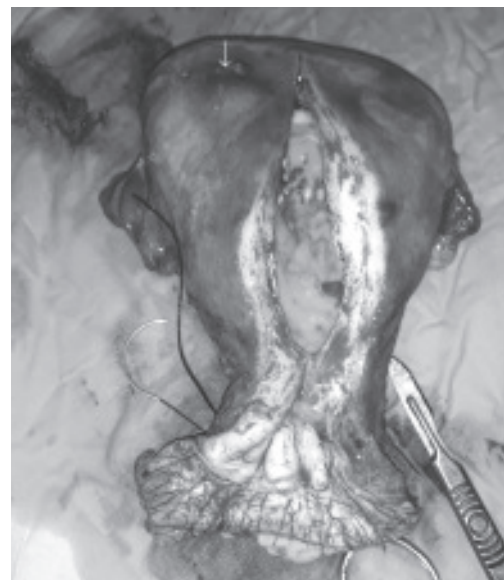


Fig -4: Cut section of the uterus showing pus within the cavity and site of perforation at the fundus.



Fig.-5: *Histopathology of pyometra showing Inflammatory exudates but no malignant cells.*

Discussion:

Pyometra is a very rare condition with an incidence of .1% to .5% among gynecological patients . However the incidence increases to 13.6% in elderly women.¹ Most of the cases result from cervical occlusion by malignant or benign tumors, surgery, radio therapy or atrophic cervicitis. Pyometra is common in post-menopausal women and more than 50% of non ruptured pyometra are asymptomatic^{2,3}. After menopause, when the endometrium loses its resistance and not shed cyclically, any infection which gets entry inside the uterus can persist as senile endometritis. The atrophic endometrium is destroyed and converts into granulation tissue. There is formation of pus which gets collected inside the uterine cavity. The pus is not expelled out of cervical canal due to senile narrowing or fibrosis of cervical os and poor myometrial contractility. The uterus enlarges by thinning its walls and spontaneous rupture occurs resulting in peritonitis. The organism responsible for infection are coliforms, streptococci or staphylococci, rarely tubercular⁴. Postmenopausal bleeding, vaginal discharge , uterine enlargement and cramping pain are said to be the classic symptoms of pyometra. Establishing a correct diagnosis preoperatively is not easy due to the non specificity of the symptoms.⁵ But this patient had none of these symptoms except feeling of lump in her lower abdomen for which she did not report earlier.

A spontaneous rupture of the uterus with generalized peritonitis is an extremely rare complication of pyometra. Abdominal pain, vomiting and fever predominantly are the presenting symptoms in spontaneously perforated pyometra while gynecological symptom, such as vaginal bleeding or discharge occurs in less than 10%.⁶ Spontaneously perforated pyometra is difficult to diagnose preoperatively. Its clinical findings usually mimic the symptoms of gastrointestinal tract disease and a correct diagnosis can only be made by laparotomy .Missed diagnosis are common because of non specific symptoms and a rare condition .⁷ The most frequent preoperative diagnosis are generalized peritonitis, appendicitis and perforated duodenal ulcer tract which lead to a misdiagnosis of gastrointestinal complication.⁸ Since perforated pyometra is difficult to diagnose preoperatively , it requires emergency exploratory laparotomy. As most of the patients are postmenopausal, hysterectomy with bilateral salpingo-oophorectomy is the best choice for ruptured pyometra, because peritoneal lavage with drainage is not effective in the control of infection⁹. However, as such patients are elderly with poor general condition and often with unfavorable prognosis, intensive pre and postoperative care of respiratory and circulatory system is essential. Prognosis in cases of perforated pyometra is variable. Those cases not associated with malignancy have better prognosis as compared to those who are associated with malignancy .¹⁰This reported patient was successfully managed in ICU of our hospital and hopefully she could be discharged alive from the hospital.

Conclusion:

Although an uncommon finding possibility of spontaneously ruptured pyometra should be considered when elderly women suffer from acute abdominal pain. Prompt resuscitation, exploratory laparotomy, total abdominal hysterectomy with bilateral salpingo-oophorectomy and copious peritoneal lavage is the definitive surgical treatment. Mortality from spontaneously ruptured pyometra exceed 40% and again highlight the importance of multidisciplinary involvement in treating sepsis.

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