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CASE REPORT

A Rare Case of Spontaneous Rupture of Postmenopausal Pyometra presented as Pyoperitoneum

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ABSTRACT

Introduction: Pyometra is the collection of pus in the uterine cavity due to occlusion of the endocervical canal. Spontaneous perforation of pyometra and subsequent diffuse peritonitis is a very rare, but life-threatening complication.

Case report: We report a rare case of peritonitis with a pyoperitoneum in an elderly female, which was caused by a spontaneous perforation of pyometra. A 70-year-old P7 postmenopausal female presented in the emergency department with signs of diffuse peritonitis. Contrast-enhanced computed tomography (CECT) abdomen showed infective pathology of uterus with rupture. At laparotomy, about 400 mL of pus was found in the peritoneal cavity and a rent of about 2 × 1 cm was present on the fundus of the uterus. Peritoneal lavage, total abdominal hysterectomy, and salpingo-oophorectomy were performed. She was discharged on the 14th postoperative day (POD) without any major complication. Histopathology showed atrophic endometrium with severe endometritis and no e/o malignancy and cervix showed chronic cervicitis.

Conclusion: Spontaneous rupture of pyometra is very rare, but should be considered as a differential diagnosis in elderly postmenopausal women presenting with acute abdomen.

Keywords: Postmenopausal, Pyometra, Spontaneous uterine rupture.

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INTRODUCTION

Pyometra is the collection of pus in the uterine cavity. The cause of pyometra is occlusion of the endocervical canal secondary to benign or malignant condition, i.e., malignant growth, stenosis following age-related atrophy, radiation treatment, or surgery on the cervix.[1] Spontaneous perforation of pyometra and subsequent diffuse peritonitis is a very rare complication, but requires timely diagnosis and treatment, as it is a life-threatening condition.

CASE REPORT

A 70-year-old multiparous woman presented to the casualty department as an emergency case with c/o fever with chills, burning micturition, pain in the lower abdomen for 3 to 4 days, and diarrhea for 1 day. She had attained menopause 20 years back and did not have any gynecological problems in the past. No significant past medical and surgical history was present. Her vital parameters were stable except for mild tachycardia (pulse rate being 110 beats/min). Blood pressure was 110/70 mm Hg. Temperature was 100°F.

On per abdomen examination, diffuse guarding, rigidity, and tenderness were present. On per speculum examination, cervix was atrophied flushed with vagina and healthy, P/V all fornices shallow and tender, and uterus size could not be assessed.

Laboratory investigations revealed neutrophilic leukocytosis (white cell count of 15,900/cc with 74% neutrophils) and a low hemoglobin of 8.8 gm/dL, with a normal platelet count at 2.36 lakh/cc. Urine routine showed 30 pus cells and protein ++.

A transabdominal ultrasound was done, which showed supraumbilical hernia rest within normal limit.

Emergency contrast-enhanced computed tomography of abdomen and pelvis was performed, which showed bulky abnormally enhancing uterus with hydrometra and a defect in its anterior wall with abnormal irregular enhancement along the right endomyometrial region, irregular collection in pelvis extending in lower abdomen, pneumoperitoneum with air foci predominantly in upper abdomen, patchy areas of bowel wall thickening, and dilatation suggestive of inflammation with paralytic ileus. These findings were suggestive of infective pathology of

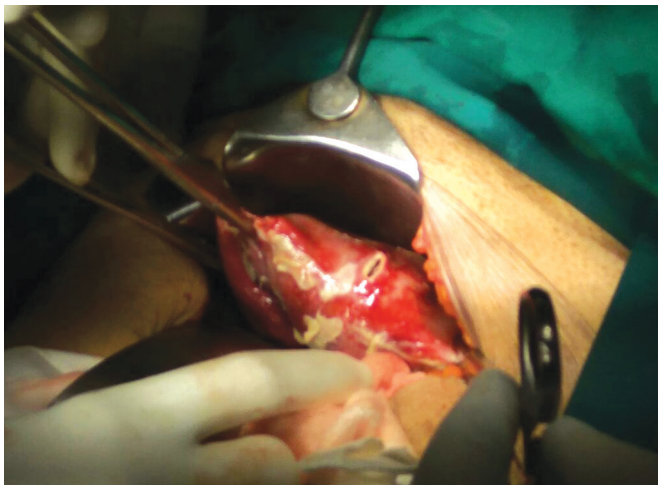

Fig. 1: Intraoperative finding, uterine perforation

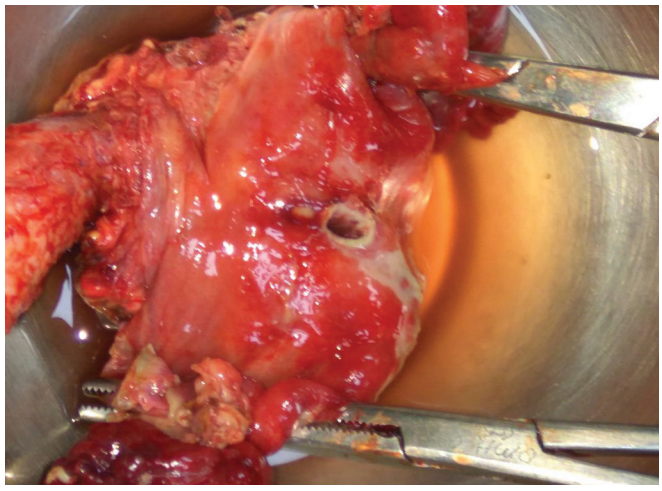

Fig. 2: Hysterectomy specimen showing uterine perforation

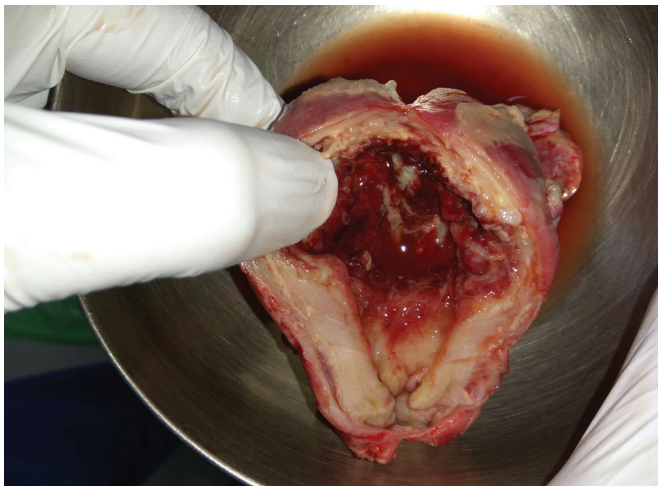

Fig. 3: Cut open specimen showing collected pus inside the uterine cavity

uterus with rupture, possibly secondary to gas-forming organisms. Decision of laparotomy was taken; peroperative 400 mL pus was removed, which was collected in the pelvis around uterus, ovary, pouch of douglas and upper abdomen. Pus was superficially adherent to bowel. A 2 × 2 mm defect was seen in anterior uterine wall near fundus, and pus was seen coming out of the uterus. There was right ovarian cyst approximately 7/5/4 cm, and umbilical hernia was present containing omentum and fat (Figs 1 and 2).

Pus was aspirated and sent for cytology and culture sensitivity, peritoneal lavage was given, total abdominal hysterectomy and bilateral salpingo-oophorectomy were done, and she was maintained on high antibiotics (Fig. 3).

DISCUSSION

Pyometra is seen mainly in elderly postmenopausal females due to impaired drainage of uterine cavity. The most common cause of pyometra is malignancy of genital tract and sequelae of radiotherapy.[2] Spontaneous rupture of pyometra is a very rare complication. Obstruction of the cervical canal and degenerative or necrotic changes in the wall of the uterus lead to spontaneous perforation of uterus, i.e., usually seen in cervical or endometrial carcinoma or a forgotten intrauterine contraceptive device,[3] but may occur in stenosis following age-related atrophy, as has occurred in our case. Uterus mostly perforates from the fundus. The organisms responsible for infection are coliforms, streptococci, or staphylococci and are rarely tubercular.[1] In our case, the organism isolated was *Streptococcus anginosus*.

Preoperative diagnosis of perforated pyometra is difficult. Clinically, it mimics the symptoms of gastrointestinal tract perforation.[4] It is mentioned in prior case reports that, in most cases, a correct and definite diagnosis of spontaneous rupture of pyometra was made only by laparotomy.[5,6] In our case, we could diagnose it preoperatively with the help of a computed tomography scan.

The treatment is immediate laparotomy, peritoneal lavage, drainage, simple hysterectomy, and broad-spectrum antibiotics, as was done in our case. Prognosis in cases of perforated pyometra is variable. Those not associated with malignancy have better prognosis as compared with those cases that are associated with malignancy.[7] In our case, histopathology suggested atrophic endometrium with severe endometritis leading to uterine perforation. No evidence of malignancy was present.

CONCLUSION

Spontaneous rupture of pyometra is very rare, but should be considered as a differential diagnosis in elderly postmenopausal women presenting with acute abdomen, as it carries a high risk of morbidity and mortality. Considering the increasing proportion of the elderly population, the condition may increase in incidence. Abdominal

hysterectomy with bilateral salpingo-oophorectomy with copious peritoneal lavage is the procedure of choice for these patients.

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