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Case Report

A Rare Case of Peritonitis Following Spontaneous Rupture of Pyometra

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ABSTRACT

Pyometra is the accumulation of pus in the uterine cavity. The reported incidence varies from 0.5% in young patients to 13.6% in elderly patients attending gynecological clinic. It is a common complication of malignancy of cervix and uterine body. The cause of pyometra is the occlusion of cervical canal by benign or malignant growth, stenosis following age-related atrophy, radiation treatment, or surgery on the cervix. A spontaneous rupture of pyometra causing diffuse peritonitis is very rare, with reported incidence of 0.01% to 0.5% in elderly women. Unless recognized in time, it can be a life-threatening condition. We present a case of 65-year-old woman who presented with this rare and life-threatening complication. She was treated by emergency exploratory laparotomy. Total abdominal hysterectomy with bilateral salpingo ophorectomy was performed. Patient had uneventful postoperative period.

KEY WORDS: Peritonitis, postmenopausal woman, rupture of pyometra

INTRODUCTION

Pyometra is the accumulation of pus in the uterine cavity. Reported incidence varies from 0.5% in young patients to 13.6% in elderly patients attending gynecological clinic.[1] It is a common complication of malignancy of cervix and uterine body. The cause of pyometra is the occlusion of cervical canal by benign or malignant growth, stenosis following age-related atrophy, radiation treatment, or surgery on the cervix.[2] A spontaneous rupture of pyometra causing generalized peritonitis is very rare, with reported incidence of 0.01% to 0.5% in elderly women.[3] Unless recognized in time, it can be a life-threatening condition.

CASE REPORT

A 65-year-old woman presented to casualty department as an emergency case with distension of abdomen and pain in lower abdomen of two days duration. Pain in abdomen was sudden in onset, dull aching, progressive in intensity, localized initially in lower abdomen and then became generalized within 24 hours. She was restricted to bed due to the pain. There was no vomiting or other bowel and bladder complaint. There were no aggravating or relieving factors. She had attained menopause 20 years back and did not have any gynecological problems in the past. She did not suffer from any major medical or surgical illness in the past. On examination, she had cold clammy skin (oral temperature- 94° F) and features of septic shock. She had tachycardia (pulse rate-126/minute) and hypotension (90/50 mmHg). Abdominal examination revealed signs of generalized peritonitis. Speculum examination revealed atrophic vaginitis. Cervix was atrophic and os was stenosed. Rectal examination revealed tenderness and bogginess in pouch of Douglas. There was no mass in the pelvis. Blood investigation revealed polymorphonuclear leucocytosis and abnormal renal function tests. Her serological tests for HIV, hepatitis, and syphilis were non-reactive. Ultrasound of abdomen revealed free fluid in Morrisons pouch, lenorenal recess, and pouch of Douglas. Uterus measured 8.6 cm length and 5.5 cm wide. There was fluid in the uterine cavity. Uterus was deformed in the fundal region. X-ray of abdomen revealed normal findings. There was no gas under diaphragm or distended bowel loops. Provisional clinical diagnosis of primary peritonitis was kept. Considering the amount of fluid in the peritoneal cavity and the toxic condition of the patient, decision of exploratory laparotomy was taken after obtaining high risk consent from the relatives. Exploratory laparotomy revealed two

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openings, each measuring 0.5 cm, near fundus on anterior and posterior walls of the uterus. Uterus was bulky, soft, and friable. Uterine walls near the perforation sites were papery thin. Both tubes and ovaries were normal. There was no growth in the cervix. Abdominal cavity was explored for any other source of infection. There was 1 liter of pus in the peritoneal cavity. Pus was drained. Peritoneal lavage was given after performing total abdominal hysterectomy with bilateral salpingo ophorectomy. In the postoperative period, patient received one unit of fresh blood transfusion, broad spectrum antibiotics, supportive treatment, and good nursing care. Patient was discharged from the hospital on 10th postoperative day. The histopathology report of uterine specimen revealed senile endometritis. There was no evidence of malignancy. *E. Coli* was isolated from the pus collected from the peritoneal cavity.

DISCUSSION

Pyometra is the collection of pus or a mixture of pus and blood inside the uterus. Stenosis of the cervical canal in carcinoma cervix, carcinoma corporis, operations on cervix, radiotherapy, senile endometritis, puerperal endometritis with retention of lochia, tubercular endometritis are some of the common causes of pyometra.[4-8] It mainly occurs in the senile or postmenopausal age group and very rarely, in premenopausal age group.[9] These patients usually present with the symptoms of purulent vaginal discharge, suprapubic pain, and postmenopausal bleeding or spotting.[10] After the menopause, when the endometrium loses its resistance and not shade cyclically, any infection which gets entry inside the uterus can persist as senile endometritis. The atrophic endometrium is destroyed and converted 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 cervix and poor myometrial contractility. The uterus enlarges by thinning its walls, and spontaneous rupture occurs resulting into peritonitis. The organisms responsible for infection are *coliforms*, *streptococci*, or *staphylococci*, rarely tubercular.[2] In the present case, *E. Coli* was isolated from the pus collected from the peritoneal cavity. Senile endometritis, presenting as pyometra, requires cervical dilatation and drainage of pus. This case had an unusual presentation in the form of rupture of pyometra with subsequent development of peritonitis due to over distention and thinning of walls of the uterus. Development of peritonitis in old age is usually due to some primary pathology in the gut. Peritonitis secondary to gynecological cause is usually not thought off. Patients are usually referred to surgeons. Peritonitis secondary to rupture of pyometra should be considered as surgical emergency, and immediate laparotomy must be performed to avoid the complications of generalized peritonitis. Septic shock is one such life-threatening complication. Total abdominal hysterectomy with bilateral salpingo ophorectomy may be the ideal choice of definitive surgery. There has been a report of the need for relaparotomy in a patient, who had undergone conservative surgery for ruptured pyometra.[11] In the present case, there was uneventful postoperative period following total abdominal hysterectomy with bilateral salpingo ophorectomy.

CONCLUSION

Rupture (perforation) of pyometra should be considered when postmenopausal woman presents with features of acute abdomen with signs of peritonitis. Resuscitation and emergency laparotomy should be performed. Total abdominal hysterectomy with bilateral salpingo ophorectomy and peritoneal lavage may be the ideal choice of definitive surgery.

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