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PNEUMOPERITONEUM CAUSED BY PERFORATION OF PYOMETRA WITHOUT MALIGNANCY

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Uterine perforation is a rare condition that must be considered in the differential diagnosis of acute abdominal pain, especially in elderly woman. Delayed diagnosis due to nonspecific symptoms may lead to sepsis caused by purulent material accumulated in the abdominal cavity.

An 83-year-old woman was admitted to the emergency department suffering from acute abdominal pain. Physical examination of the abdomen revealed extensive tenderness and muscular rigidity. Due to free air on the abdominal X-ray, perforation of the gastrointestinal tract was diagnosed and an emergency laparatomy was performed. A perforation approximately 25 mm in diameter was found in the uterine corpus and a total hysterectomy with bilateral salpingo-oopherectomy was carried out. In the culture of purulent fluid anaerobic bacteria were detected and histological examination revealed only necrosis without malignancy. The patient died on the eight postoperative day because of pulmonary complications.

Due to the increasing size of the older population, pyometra and related complications may be encountered more frequently. Evaluation of these patients and a correct preoperative diagnosis of pneumoperitoneum caused by pyometra should be considered carefully.

Key Words: Pyometra, uterine perforation, pneumoperitoneum, acute abdomen.

MALİGNİTE OLMAKSIZIN PYOMETRA PERFORASYONUNA BAĞLI GELİŞEN PNEUMOPERİTONEUM

Uterus perforasyonu özellikle yalşı kadın hastalarda akut karın ayrıcı tanısında dikkatle değerlendirilmesi gereken nadir bir durumdur. Spesifik olmayan semptomlara bağlı olarak tanıda gecikilmesi, karın içerisinde biriken pürülan materyal nedeniyle sepsise yol açabilir.

Acil servise karın ağrısı nedeniyle başvuran 83 yaşında bayan hastanın fizik muayenesinde abdominal hassasiyet ve musküler rigidite tesbit edildi. Direkt grafilerinde karın içerisinde serbest hava saptanması üzerine gastrointestinal perforasyon düşünülen hasta acil laparatomiye alındı. Operasyonda uterus korpusu üzerinde yaklaşık 25mm lik bir perforasyon görülen hastaya total abdominal histerektomi-bilateral salpingooferektomi uygulandı. Yapılan kültürde anaerobik bakteriler üredi ve histopatolojik incelemede malignite olmaksızın nekroz tesbit edildi. Hasta postoperatif 8. günde pulmoner komplikasyonlara bağlı olarak exitus oldu.

Yaşlı popülasyonun artışına bağlı olarak pyometra ve ilgili komplikasyonlar daha sık görülmektedir. Pyometraya bağlı bir pneumoperitoneumun preopratif doğru tanısının konulabilmesi için bu hastaların dikkatle değerlendirilmesi gereklidir.

Anahtar Kelimeler: Pyometra, uterus perforasyonu, pneumoperitoneum, akut karın.

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INTRODUCTION

Pyometra is defined as the accumulation of purulent material in the uterine cavity. It is common in postmenopausal woman and usually asymptomatic. The incidence of pyometra increases with age and decline in activity; incontinence is also a significant risk factor (1). Although spontaneous perforation is an extremely rare complication of pyometra, it must be considered in the differential diagnosis of peritonitis, especially in elderly woman suffering from acute abdominal pain. Herein we report an 83-year-old woman presenting with generalized peritonitis and pneumoperitoneum caused by perforation of pyometra without malignancy.

CASE REPORT

An 83-year-old woman was admitted to our emergency department with anorexia and vomiting lasting about two days without abdominal pain or melena. She was a poorly active woman with a history of diabetes mellitus. The physical examination revealed tenderness and muscular rigidity in the lower abdomen. Her blood pressure was 100/70 mmHg and pulse rate was 110/min with atrial fibrillation. The results of the laboratory tests on admission were as follows: white blood cell count 22,000/mm^3, hemoglobin 10.9 g/dl and blood glucose 771 mg/dl. Urine density was 1030. Immediately insulin infusion was planned. Plain radiography disclosed subphrenic free air on the right side (Figure 1). Abdominal ultrasonography excluded a possible mesenteric ischemia by Doppler imaging and demonstrated small amounts of free fluid accumulation in the lower abdomen. Diffuse peritonitis was detected and an emergency laparotomy was performed with the diagnosis of perforation of the gastrointestinal tract. During the operation 500 ml of purulent fluid was aspirated from the peritoneal cavity. Examination of the gastrointestinal tract, gallbladder, liver and spleen revealed no abnormal findings, but the uterus was markedly enlarged, thin walled and had a perforation, 2.5 cm in diameter, located on the anterior surface of uterine corpus with a necrotic area around it (Figure 2). Purulent fluid was discharged from the lesion with compression of the uterus. Total hysterectomy with bilateral salpingo-oophorectomy was performed.

In the culture of the purulent fluid bacteroides were isolated as anaerobic bacteria.

Pathological examination revealed pyometra with dilated uterine body with generalized necrosis on the walls and a perforation about 2.5 cm in diameter located on the anterior of the uterine corpus without any evidence of malignancy.

She was extubated postoperatively on the 2nd day and followed up in the intensive care unit. On the 8th postoperative day severe dyspnea started with hypoxia and the patient died due to pulmonary complications.

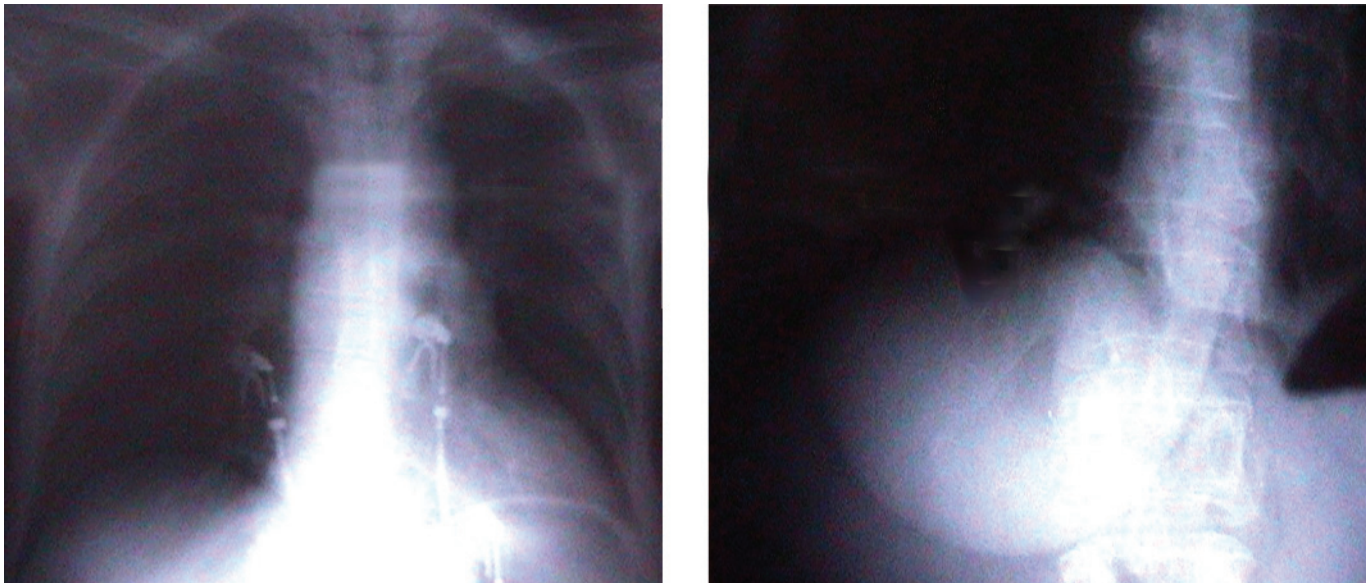

Figure 1: Subphrenic free air.

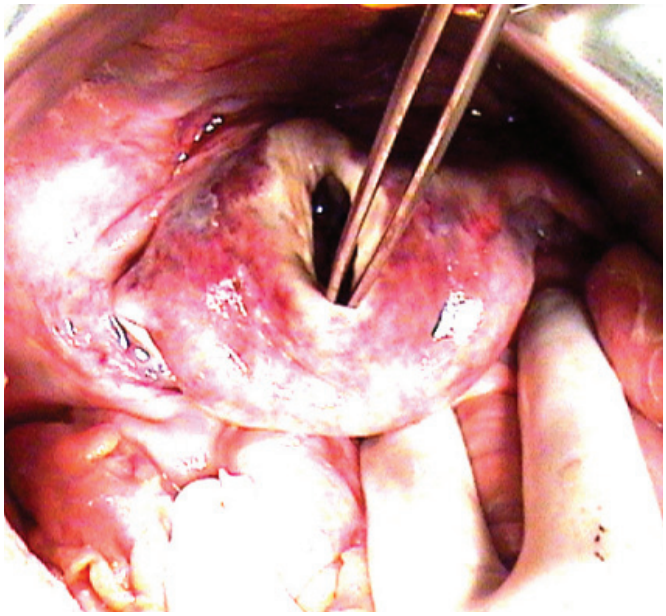

Figure 2: Perforation area on the anterior surface of the uterine corpus.

DISCUSSION

Pyometra is the accumulation of purulent material in the uterine cavity. It has been reported to account for 0.2%-0.5% of all gynecological admissions and 13.6% of disorders of elderly gynecological patients and is usually asymptomatic (2-4). However, generalized peritonitis and pneumoperitoneum due to perforated pyometra is a very rare condition (5). There are only a few case reports of pneumoperitoneum without any perforation of the GI tract in the literature (2). The causes of pneumoperitoneum other than GI tract perforations are perforated pyometra, perforated liver abscess and ruptured necrotic lesions of a liver metastasis (6).

The presence of acute abdominal pain with free air on the plain abdominal X-ray usually leads to a diagnosis of gastrointestinal tract perforation. However, other possible causes in such patients should also be taken into consideration (7). Establishing a correct diagnosis is not easy in patients with pyometra depending on the history and physical findings. If a pelvic examination had been performed preoperatively, we would have found uterine enlargement and cervical tenderness, and a correct diagnosis might have been possible. The reason for pneumoperitoneum is not clear; it is speculated that it may be due to the gas produced by the anaerobic bacteria isolated in such a case (2).

In elderly patients who have high operative morbidity and mortality, diagnostic laparoscopy can be an alternative procedure, but the general condition of the patient must be evaluated carefully.

The increase in the number of older individuals may lead to an increase in peritonitis due to perforated pyometra (1). Therefore, along with all other frequent causes of generalized peritonitis, perforated pyometra should also be taken into consideration in the differential diagnosis of acute abdomen in elderly women (8). For establishing a correct diagnosis in elderly patients with acute abdominal pain, a gynecological examination should also be performed preoperatively. Pelvic ultrasonography and CT are useful in the diagnosis. When peritonitis caused by perforated pyometra is diagnosed, emergency surgery is indicated; because these patients are often in generally poor condition the surgical choice must be chosen according to the patient and after the operation the follow-up should be in the intensive care unit with strict management of respiration and circulation.

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