CASE REPORT

Spontaneous perforation by pyometra —
an acute emergency

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Accumulation of pus in the uterine cavity is termed pyometra and has an incidence of 0.1 - 0.5%. We report a case of spontaneous pyometra rupture with subsequent peritonitis.

Case report
A 55-year-old postmenopausal woman, para 5, gravida 5, presented to the emergency department at UCMS & GTB Hospital, New Delhi, India, a tertiary care centre, with acute severe abdominal pain, from which she had been suffering for 6 hours. She had no history of intrauterine contraceptive device (IUCD) insertion, dilatation and curettage, postmenopausal bleeding or discharge, or significant medical or surgical illnesses.

On examination she was pale and dehydrated, with a pulse rate of 114/min, a blood pressure of 90/60 mmHg and a respiratory rate of 20/min. The findings on chest examination were normal, as was the cardiovascular system. Abdominal examination revealed distension with diffuse tenderness, guarding and rigidity. Bowel sounds were absent.

On examination with a speculum the ectocervix appeared normal and examination per vaginum revealed a soft uterus of normal size with tenderness in the bilateral fornices. A haemogram revealed leucocytosis, and an erect X-ray of the abdomen showed gas under the diaphragm. A provisional diagnosis of intestinal perforation was made and an urgent laparotomy was performed.

There was 500 ml of foul-smelling pus in the abdominal cavity, but the bowel was normal. There was a 1.5×1cm tear on the anterior wall of the uterus, with black discoloration and shaggy margins (Fig. 1), through which pus was draining. Total hysterectomy with bilateral salpingo-oophrectomy was performed and thorough peritoneal lavage was done. The patient was observed in the intensive care unit and received piperacillin, tazobactam and metronidazole for 2 weeks. Histopathological examination revealed an atrophic endometrium with necrotic tissue and chronic cervicitis. The pus culture was sterile. The patient was discharged in a stable condition on postoperative day 21.

Discussion
Pyometra is an uncommon condition that occurs mainly in postmenopausal women. Although atrophic endometrium is a common cause of pyometra, perforation is usually seen in the presence of serious causes such as cervical or endometrial carcinoma, or a forgotten IUCD. Spontaneous perforation with diffuse peritonitis is very rare, and the incidence is 0.01 - 0.05%.

The classic triad of symptoms in patients with pyometra consists of purulent vaginal discharge, postmenopausal bleeding and lower abdominal pain. In our case these symptoms were absent and the patient presented to the emergency department with an acute abdomen.

In an exhaustive literature review of spontaneous uterine rupture, Yildizhan et al. concluded that the most common pre-operative diagnoses of acute abdomen in postmenopausal females were generalised peritonitis (47.4%), pneumoperitoneum (47.4%) and perforation of the gastro-intestinal tract (36.8%) (often more than one symptom is present), while pyometra perforation was suspected only in 15.8%. In the present case intestinal perforation was the first differential diagnosis. In 85.7%
of cases the site of perforation was the uterine fundus, while in our case the perforation was in the anterior uterine wall.

The treatment of choice is total abdominal hysterectomy with bilateral salpingo-oopherectomy, as was done in our case. Malignant disease is present in 35% of cases, but in our patient the histological findings showed no cancer to be present.

Conclusion
Rupture of pyometra should be kept in mind as a differential diagnosis in women with an acute abdomen, especially if they are postmenopausal. The treatment of choice is hysterectomy with bilateral salpingo-oopherectomy. Intensive care with strict management of respiration and circulation is essential. A histopathological diagnosis should always be established.

South African urologists are not trained in posterior compartment prolapse during their formal postgraduate training. They are mainly trained in industry-driven workshops aimed at the increased use of mesh kits. This is the main reason why urologists use mesh kits much more often as a first choice of procedure than gynaecologists (see Adam et al.). They are not trained in non-mesh procedures as gynaecologists are.

In my opinion, there is currently no legitimate approval in South Africa for urologists to operate in the posterior compartment. Female urology is not a registered sub-discipline, and FPMRS does not officially exist in this country. The time has come for specialists in urogynaecology, female urology and colorectal surgery to get together and discuss this burning issue.