

# Postmenopausal Spontaneous Uterine Perforation as a Cause of Pneumoperitoneum: A Case Report and Literature Review.

Landau K<sup>1</sup>, Gomez E<sup>2</sup>, Santiago SK<sup>2</sup>

<sup>1</sup>Department of Obstetrics and Gynaecology, Westmead Hospital, Sydney, Australia

<sup>2</sup> Department of Obstetrics and Gynaecology, Blacktown Hospital, Sydney, Australia

## Background

Spontaneous uterine perforation secondary to pyometra is a very rare gynecological condition occurring most often in elderly women and is associated with significant morbidity and mortality(1). It is often diagnosed at time of emergency laparotomy for misdiagnosed gastrointestinal perforation(2).

## Case

A 74-year-old female on hemodialysis was admitted after a general decline at home and rising inflammatory markers. An abdominal CT showed free fluid and intraabdominal gas suggestive of bowel perforation with evidence of a concurrent uterine abscess. Emergency Laparotomy was performed for suspicion of duodenal ulcer perforation, however the gastrointestinal tract was intact and a fundal uterine perforation was found. Total hysterectomy and bilateral salpingo-oophorectomy was performed. Histopathology revealed no evidence of cancer. *Escherichia coli* was isolated from washing collected.

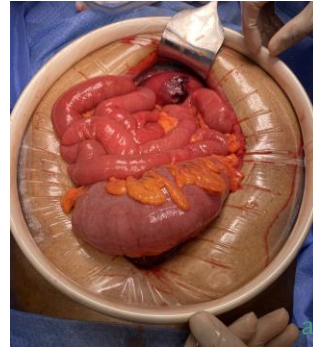


Figure 1: Intra operative laparotomy findings showing (a) perforated uterus (b) the fundal site of perforation.



Figure 2: CT images showing a) Uterus containing 93mL of fluid containing gas b) pneumoperitoneum and mild ascites

## Discussion

Since 1980, 64 cases have been reported in English literature. Of those, a preoperative diagnosis of spontaneous uterine perforation was made in 30% (n=19) of cases. Gastrointestinal source of perforation was suspected prior laparotomy in 42% (n=27). The Mortality rate is 27% (n=17). The most common bacteria isolated was *Escherichia coli*. The average age of diagnosis is 73 years. Uterine cancer was only found in 14% of cases(n=9).

While rare, perforation secondary to pyometra should factor into differential diagnosis in post-postmenopausal pneumoperitoneum if signs of pyometra are also present. Improving pre-operative diagnosis could result in a improved post-operative recovery burden from laparotomy in a population with already high surgical morbidity and mortality.

1: Muram D, Drouin P, Thompson FE, Oxorn H. Pyometra. Canadian Med Association Journal. 1981 Sep 15;125(6):589-92.

2: Ou YC, Lan KC, Lin H, Tsai CC, et al. Clinical characteristics of perforated pyometra and impending perforation: specific issues in gynecological emergency. Journal Obstetric Gynaecological Res. 2010 Jun;36(3):661-6