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Case Report
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Pyometra from Gastric Perforation: A Rare Complication of Abdominal Sepsis

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Abstract

Pyometra, defined as the accumulation of pus in the uterus, is a gynecologic condition that should always be actively drained in order to prevent rupture of the uterus and dissemination of the infection in the peritoneum. Many are the causes described for this disorder and in this paper; we present the first case, to our knowledge, of intraperitoneal sepsis as a possible cause of pyometra.

Introduction

Pyometra is defined as the accumulation of pus within the uterine cavity related to an occlusion of the cervical canal. There are many causes for pyometra, well described in literature: Malignancies of the uterus or the pelvis invading the cervix, benign tumor of the cervix such as polyps or fibromas, past surgery on the cervix and post radiation cervicitis [1]. Multiple case reports suggest that rupture of the uterus consequent to pyometra, despite being a rare complication, is associated to peritonitis and abdominal abscesses [2-5]. Nevertheless, there is no evidence in literature of abdominal abscess as the cause of pyometra. We present the first case, to our knowledge, of pyometra occurring as complication of abdominal sepsis for gastric perforation.

Case Presentation

An 80-year-old female patient was transferred to our department after one month hospitalization in a smaller hospital for gastric ulcer perforation (*Helicobacter pylori* positive) treated by surgical debridement and omental patch. The post-operative evolution was complicated by multiple abdominal abscesses. An empiric antibiotic therapy with intravenous piperacillin-tazobactam, both for *Helicobacter pylori* and abdominal sepsis, was started with percutaneous attempt of drainage. The patient was then transferred to our hospital for family reunification, where a new abdominal CT scans was performed, confirming the persistence of a perisplenic abscess, a pelvic abscess and pyometra (Figure 1).

We performed a new percutaneous CT-guided drainage of the pelvic abscess, while the perisplenic abscess, smaller and hardly reachable by percutaneous approach, and were treated conservatively. The gynecologists performed a hysteroscopy with emergent dilatation and curettage to manage the pyometra. The procedure was well tolerated and no other possible causes for pyometra were found. We observed a good clinical, biological and radiological evolution. A further CT imaging showed an improvement with reduction of abdominal collections and complete disappearance of the pyometra. The final histology of the ulcer biopsies showed a poorly differentiated gastric cancer ulcerated. She was then treated, after a period of rehabilitation, with partial gastrectomy with no further therapies needed (Figure 2, 3).

Discussion

Pyometra is a collection of purulent material in the uterine cavity due to the impossibility of draining the cervix and this is a potentially lethal disease widely diffused within the veterinary community, especially between dogs [6]. It is less widespread among humans, occurring more frequently in postmenopausal women with gynecological tumors, both malign and benign lesions [7]. Pyometra should always be surgically evacuated by dilatation of the cervical canal and curettage in order to prevent uterine rupture.

It is widely described that pyometra, if not properly treated, can sometimes cause a rupture of the uterus with peritonitis and sepsis [8]. To our knowledge, there are no cases described in literature with an abdominal sepsis as main cause of pyometra.

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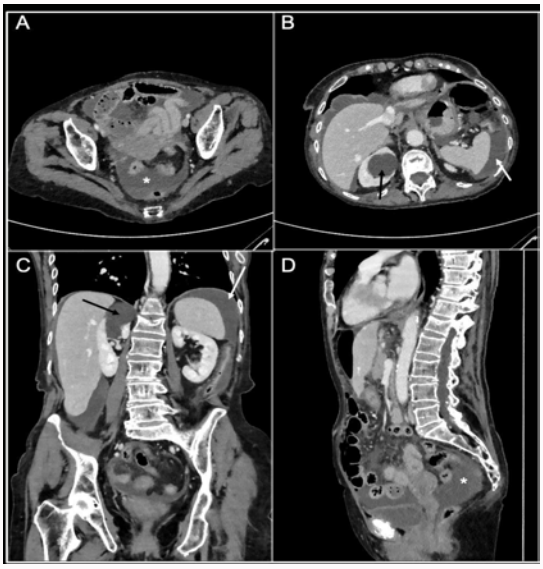

Figure 1: On arrival abdomen-CT images. A: axial view showing a pelvic abscess (*) without any sign of pyometra. B and C: axial and coronal views showing a peri-splenic abscess (white arrow) and a peri-hepatic abscess (black arrow). D: sagittal view showing the extension of the pelvic abscess (*) with a normal uterus.

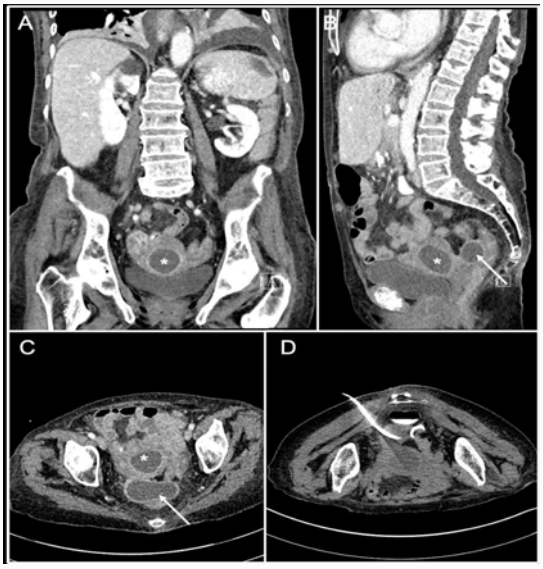

Figure 2: CT with intra-venous contrast at arrival to our department. A: Coronal view after IV injection of contrast showing the appearance of an abscess (*) within the uterus. B and C: Sagittal and axial views after IV injection of contrast showing pyometra (*) and pelvic abscess (white arrow). D: CT-guided pelvic abscess drainage performed by interventional radiologists at our hospital.

In this case, classical evacuation of the pyometra, followed by appropriate antibiotic therapy, was successful in controlling the septic phase.

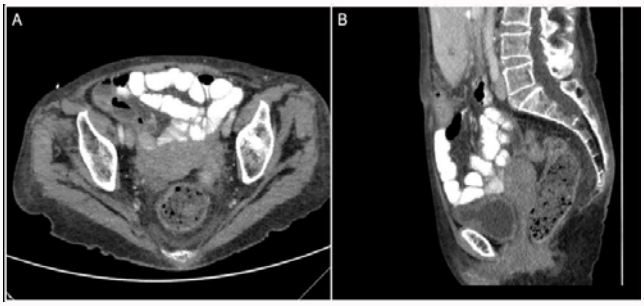

Figure 3: A and B: Axial and sagittal view of a 2-months follow-up- CT showing, after IV injection of contrast no residual of the pelvic abscess or pyometra.

Conclusion

Pyometra is a rare condition, never described in literature as the consequence of abdominal sepsis. In this case report we present the very first case, to our knowledge, of a woman without any gynecologic disease who developed a pyometra from abdominal sepsis due to gastric perforation. In this case a conventional management of pyometra with dilatation of the cervical canal, curettage and appropriate antibiotic therapy was successful.

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