

Recurrent abdominal wall inflammation

Thursday, 01 March 2007

A 59-year-old female presented with superficial hypogastric pain and low grade fever of one week duration. The patient had a history of ovarian cancer for which she underwent two abdominal operations as well as chemotherapy two years earlier. Six months prior to her visit she had been operated for hypogastric abdominal hernia with abdominal wall reconstruction using mesh support. Physical examination on admission showed erythema in the hypogastric area extending around the middle line (Figure). Routine laboratory testing, including erythrocyte sedimentation rate (ESR) did not show abnormal findings.

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Diagnosis

A CT scan of the abdomen showed signs of inflammation in the abdominal wall, including an area with fluid collection around the mesh. The CT scan characteristics of the fluid, including its density, suggested an infectious process. *Staphylococcus aureus*, grew from a specimen of the fluid taken by paracentesis.

Management

A first attempt to manage the infection by clindamycin 300 mg every 8 hours per os for 7 days failed. A 7-day course of intravenous clindamycin 600 mg every 8 hours and moxifloxacin 400 mg every 24 hours (for the possibility of an undiagnosed mixed infection with a Gram negative bacterium) also failed to manage the infection. To control the infection, the patient was operated and the mesh was removed. Cultures from mesh samples also grew *Staphylococcus aureus*. Combined surgical and medical management (removal of the mesh and post-operative antibiotics for 14 days) led to the cure of the infection.

Teaching Points

- This case describes a late-onset prosthetic infection following mesh repair of abdominal hernia.
- The interval between hernia repair and manifestation of a mesh infection according to different studies ranges from 2 weeks to 39 months.
- Symptoms and signs of local acute inflammation (such as pain, erythema, tenderness, swelling, and increased temperature in the abdominal wall in the area of the mesh) may suggest a mesh related infection. Some patients may also have systemic manifestations such as fever, malaise, chills or rigors.
- Less usual presentations include a discharging enterocutaneous fistula, or an intraabdominal abscess.
- Osteomyelitis following an inguinal hernia surgery with implantation of a polypropylene mesh, has also been reported as a rare manifestation of the infection.
- It is important to realize that seroma formation is equally common to actual infection in the area. Fluid formation around the mesh should be properly evaluated, when visualised by imaging techniques. CT imaging usually provides adequate information to differentiate between seroma and actual infection. Diagnostic paracentesis can be helpful in establishing a diagnosis, although it carries the risk of infecting the area itself.
- The most commonly isolated organisms in cases of mesh infection are *Staphylococcus* species, especially *Staphylococcus aureus*.
- Combined medical and surgical approach, with intravenous antimicrobial agents and complete surgical removal of the mesh, is the usually recommended treatment for mesh related infections.

Reference List

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Acknowledgements

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