

Prevention of parastomal hernia by intraperitoneal onlay mesh reinforcement at the time of stoma formation

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Abstract

Purpose Parastomal hernia (PSH) is a very frequent complication after creation of a permanent colostomy. The aim of this study is to assess the safety and prophylactic effect of intraperitoneal onlay mesh (IPOM) reinforcement of the abdominal wall at the time of primary stoma formation to prevent PSH occurrence.

Materials and methods This multicentre prospective study concerned 20 patients operated for low rectal carcinoma between 2008 and 2010. Those patients had an elective and potentially curative abdominoperineal excision associated with IPOM reinforcement of the abdominal wall with a round composite mesh centred on the stoma site and covering the lateralised colon. There were 8 men and 12 women with a median age of 69 years (range: 44–88) and a body mass index of 27 (range: 21–35). The major

outcomes analysed in the study were operative time, complications related to mesh and PSH occurrence. Patients were evaluated 1 month after surgery and then every 6 months with physical examination and computed tomography scan (CT-scan). For PSH, we used the classification of Moreno-Matias.

Results Surgery was performed by laparoscopy in 17 patients and by laparotomy in 3; 12 had an extraperitoneal colostomy, and 8 had a transperitoneal colostomy. The median size of the mesh was 15 cm (range: 12–15). The median operative time was 225 min (range: 175–300), and specific time for mesh placement was 15 min (range: 12–30). One month after surgery, one patient presented with a mild stoma stenosis that was treated successfully by dilatation. With a median follow-up of 24 months (range: 6–42), no other complication potentially related to the use of the mesh was recorded and no mesh had to be removed. On clinical examination, one patient (1/20 = 5 %) had a stoma bulge that appeared a few months after surgery, but was not associated with symptoms. CT-scan evaluation confirmed that all the patients with a normal clinical examination had no PSH and revealed that the patient with the stoma bulge had a stoma loop hernia (type 1a hernia). This patient was followed up for 36 months, no clinical or radiological aggravation of the stoma loop hernia was observed, and he remained totally asymptomatic.

Conclusions With 95 % of excellent results, IPOM reinforcement at the time of end colostomy formation in selected patients is a very promising procedure. A drawback of this technique is the possibility of developing a stoma loop hernia due to sliding of the exiting colon between the covering mesh and the abdominal wall. However, this risk is low, and no adverse clinical consequence for the patient was noted in our series.

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