Surg Endosc
DOI 10.1007/s00464-016-4891-0

Long-term assessment of parastomal hernia prevention by intra-peritoneal mesh reinforcement according to the modified Sugarbaker technique

Philippe Hauters[1] · Jean-Luc Cardin[2] · Marc Lepere[3] · Alain Valverde[4] · Jean-Pierre Cossa[5] · Sylvain Auvray[6] · Dominique Framery[7] · Constantin Zaranis[8]

Received: 24 December 2015 / Accepted: 23 March 2016

Abstract
Background Parastomal hernia (PSH) is a very frequent complication after creation of a permanent colostomy. The aim of that study is to assess the safety and the long-term efficacy of an intra-peritoneal onlay mesh (IPOM) positioned at the time of primary stoma formation to prevent PSH occurrence.
Materials and methods That multicentre prospective study concerned 29 consecutive patients operated for cancer of the low rectum between 2008 and 2014. There were 14 men and 15 women with a median age of 73 years (range 39–88) and a BMI of 28 (range 21–43). All the patients had potentially curative abdominoperineal excision associated with IPOM reinforcement of the abdominal wall with a round non-slit composite mesh centred on the stoma site and covering the lateralized colon according to the modified Sugarbaker technique. The major outcomes analysed were operative time, complications related to mesh and PSH incidence. Patients were evaluated at 6-month intervals for the first 2 years and thereafter annually with physical examination and CT scan control. For PSH evaluation, we used the classification of Moreno-Matias.
Results Surgery was performed by laparoscopy in 24 patients and by laparotomy in 5; 17 had a trans-peritoneal colostomy and 12 an extra-peritoneal colostomy. The median size of the mesh was 15 cm (range 12–20), the operative time 225 min. (range 123–311) and the specific time for mesh placement 15 min. (range 10–30). With a median follow-up of 48 months (range 6–88), no mesh infection or complication requiring mesh removal were recorded. No patient developed a true PSH; two of them had a type Ia PSH (only containing the bowel forming the colostomy with a sac < 5 cm) and were totally asymptomatic.
Conclusion In our series, the incidence of PSH was 7 % and no specific mesh-related complication was noted. Prophylactic mesh reinforcement according to the modified Sugarbaker is an effective technique that addresses the issues related to the occurrence of PSH.

Keywords Parastomal hernia · Prevention · Prophylactic mesh · Intra-peritoneal only mesh · Modified Sugarbaker technique

✉ Philippe Hauters
ph.hauters@bipweb.be

[1] CHwapi, Site Notre-Dame, 9 Avenue Delmée, 7500 Tournai, Belgium

[2] Polyclinique du Maine, 4 Avenue des Français Libres, 5310 Laval, France

[3] Clinique Saint-Charles, 11 Bld René Levesque, 8500 La Roche Sur Yon, France

[4] Grand Hôpital Diaconesses, 125 Rue d'Avron, 75020 Paris, France

[5] Clinique Bizet, 23 Rue Georges Bizet, 75116 Paris, France

[6] CHP Saint-Martin, 18 Rue des Roquemonts, 14050 Caen, France

[7] C.M.C. de la Baie de Morlaix, 29600 Morlaix, France

[8] Clinique du Mail, 96, Allée du Mail, 17000 La Rochelle, France

Parastomal hernia (PSH) is a major complication after creation of a permanent stoma, no matter what modification of the surgical technique is used [1]. The reported incidence of PSH for permanent colostomy ranges from 4 to 48 % in retrospective studies [1] and from 44 to 93 % in prospective studies [2–4]. Goligher even went so far as to claim that some degree of parastomal herniation is inevitable given enough follow-up time [5]. Surgical procedures for repairing PSH are difficult and associated with

Published online: 08 April 2016