

## Clinical Image

Open Access, Volume 4

# Median incisional hernia and double parastomal hernia repair with retromuscular prosthetic biomaterial mesh using SMART technique (Stapled Mesh Stoma Reinforcement Technique) after pelvic exenteration due to cancer

Pierre-Yves Blanc\*, Bertrand Le Roy; Laura Ornella Perotto

Saint-Etienne University Hospital, Visceral and Digestive Surgery Unit – F-42055 Saint-Etienne Cedex, France.

\*Corresponding Author: **Pierre-Yves Blanc**

Saint-Etienne University Hospital, Visceral and Digestive Surgery Unit – F-42055 Saint-Etienne Cedex, France.

Email: pierre.yves.blanc.pro@gmail.com

Received: Jan 12, 2023

Accepted: Feb 07, 2023

Published: Feb 14, 2023

Archived: www.jcimcr.org

Copyright: © Blanc PY (2023).

DOI: www.doi.org/10.52768/2766-7820/2286

## Abstract

Patient aged 64 with parastomal hernia on a terminal colostomy and a Bricker ileal conduit following pelvic exenteration in the context of a locally advanced low rectal adenocarcinoma. Underwent in 2021 a first median incisional hernia using an intraperitoneal biomaterial mesh, reoperated one year later, when appeared a symptomatic parastomal hernia at stomial sites and next to the median laparotomy scar. The decision in favour of a double parastomal hernia repair using SMART technique with retromuscular prosthetic biomaterial mesh was then taken.

**Keywords:** Incisional hernia; Parastomal hernia; Colostomy; Bricker; Ileal conduit; SMART (Stapled Mesh stoma Reinforcement Technique).

## Case report

Patient aged 64 with obesity, underwent a pelvic exenteration surgery in 2019 due to ypT3N0M0 low rectal adenocarcinoma after neoadjuvant chemoradiotherapy.

A symptomatic median incisional hernia and asymptomatic parastomal hernia appeared earlier in 2021 on grade II colostomy [1]. Patient underwent a first incisional hernia repair surgery where intraperitoneal biomaterial mesh covered both stomial openings. One year after this surgery, patient showed a recurrent median herniation and 2 grade II parastomal hernias (Figure 1), symptomatic.

A second surgery was performed in 2022 with retromuscular prosthetic biomaterial mesh plasty using the SMART technique [2]. The procedure was a median open surgery with dissection of the 2 stomata identified by suture. Posterior aponeurosis was closed with bursa placement on circular stapler anvils with diameter 28 mm (colostomy) and diameter 26 mm (uros-

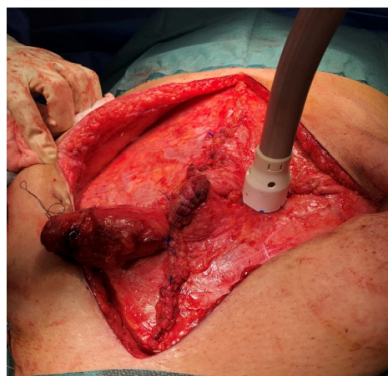
tomy). We used a double-sided biomaterial mesh measuring 30 x 35 cm, in a retromuscular position (Figure 2). The anterior aponeurosis was closed after anvils were brought out through both aponeuroses and the mesh (Figure 3). Circular stapling allowed us to create a stomial opening through aponeuroses and through the mesh (Figure 4). The two stomia were brought out quite easily. A urinary catheter was left in place in urostomy to make postoperative diuresis easier.

The development of an infected collection due to the open surgery was among main consequences. It was treated by probabilistic antibiotic therapy over 12 weeks by partial disunity of the two stomata with subcutaneous abscesses requiring controlled wound healing. Patient left the hospital 20 days later. Wound healing was completed within 3 months. No recurrence hernia after six months of follow up. In this case precisely, the use of a synthetic biomaterial mesh in a contaminated environment seems appropriate [3] together with postoperative infection management by antibiotics and local treatment.

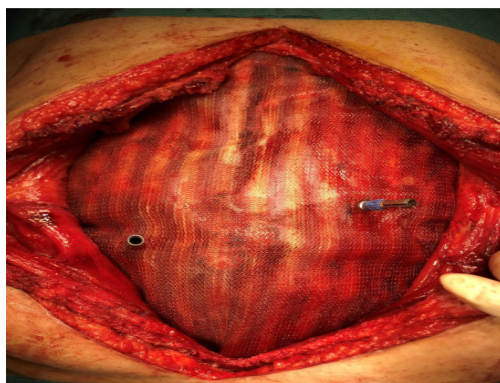
**Citation:** Blanc PV, Le Roy B, Perotto LO. Median incisional hernia and double parastomal hernia repair with retromuscular prosthetic biomaterial mesh using SMART technique (Stapled Mesh Stoma Reinforcement Technique) after pelvic exenteration due to cancer. J Clin Images Med Case Rep. 2023; 4(2): 2286.



**Figure 1:** Scan aspect of parastomal hernia – bowel content at Bricker ileal conduit (a) et epiploic appendages in contact with colostomy (b).



**Figure 4:** Circular stapling on terminal colostomy opening after closing the anterior aponeurosis (on the left, Bricker ileal loop brought out after right-side stapling).



**Figure 2:** Retromuscular placement of synthetic biomaterial mesh with implementation of a 26 mm anvil for urostomy (right) and of 28 mm for colostomy (left).



**Figure 3:** Closing of anterior aponeurosis – each of the two anvils is attached to aponeurosis by a bursa.

### References

1. Śmietański M, Szczepkowski M, Alexandre JA, Berger D, Bury K, Conze J, et al. European Hernia Society classification of parastomal hernias. *Hernia*. 2014; 18: 1-6.
2. Williams NS, Nair R, Bhan C. Stapled mesh stoma reinforcement technique (SMART) – A procedure to prevent parastomal herniation. *Ann R Coll Surg Engl*. 2011; 93: 169.
3. Vauclair E, Bert M, Facy O, Cheynel N, Rat P, Ortega-Deballon P, et al. What results can be expected one year after complex incisional hernia repair with biosynthetic mesh. *Visceral Surgery Journ*. 2021; 158: 118-124.