Ann Colorectal Res. 2015 March; 3(1): e27090. DOI: 10.17795/acr-27090

Published online 2015 March 23. **Letter**

Laparoscopic Parastomal Hernia Repair: an Effective Short Stay Procedure

Umar Shariff [1,*]; Harmeet Khaira [1]

[1]Department of General Surgery, Good Hope Hospital, Sutton Coldfield, England

*Corresponding author: Umar Shariff, Department of General Surgery, Good Hope Hospital, Sutton Coldfield, England. Tel: +44-1214247937, Fax: +44-1214249548, E-mail: umarshariff@doctors.org.uk

Received: January 9, 2015; **Accepted:** January 22, 2015

Keywords: Surgical Stomas; Herniorrhaphy; Laparoscopy

Dear Editor,

Parastomal hernias can be defined as incisional herniae, located at, or immediately adjacent to a stoma (1). Parastomal hernias are believed to develop in approximately 78% of stoma patients, typically occurring within 2 years of formation, but can also develop much later, as long as 20 or 30 years following surgery (2, 3). Unfortunately, of all stoma-related complications, parastomal hernia is the most common and significant problem encountered (2, 4). Symptomatic patients often require surgical treatment (5). There are several alternative therapeutical approaches practiced, depending on surgical expertise and experience. A laparoscopic approach using mesh is a therapeutic option for parastomal hernias (6). The laparoscopic approach is a promising way of treating parastomal hernias because of the advantages of shorter hospital stay, and lower overall morbidity rates compared to an open approach. Another potential advantage of the laparoscopic approach is that concurrent incisional herniae can be detected and repaired simultaneously. The objective of this study was to evaluate the safety and efficacy of complex laparoscopic parastomal hernia mesh repairs performed in our unit as a day case/ short stay procedure.

A retrospective case note review of all laparoscopic parastomal hernia repairs performed in our unit between 2008 and 2012 was performed. A proforma was used to extract data on sex, age, in-patient stay, operative time and technique, complications and follow-up. From (2008-2014) 14 cases were performed in our unit. The sex distribution was 8 males and 6 females. Median age of patients was 72 (range: 64-83). The median operating time was 70.5 minutes (range 68-99 minutes). The median in-patient stay was 2 days (range 2-6 days). Four patients (29%) were discharged on the same day; 70% patients were discharged within 72 hours. There were no intra-operative bowel, mesh or wound complications; one patient had a prolonged post-operative ileus. The 'modified Sugarbaker technique' was performed in 8 patients (4 paraurostomy and 4 paracolostomy repairs); 'key-hole' technique performed in 6 paracolostomy patients. After a median follow-up of 12 (range 3-24) months, one patient (7%) had a recurrence. This patient underwent a successful re-do laparoscopic mesh repair. Unfortunately, symptomatic parastomal hernia patients often suffer from poor quality of life (7) and require surgical repair due either local irritative symptoms or life-threatening situations such as perforation and obstruction. Our experience suggests that a laparoscopic parastomal mesh hernia repair is an effective day case/ short stay procedure associated with acceptable short-term results, regardless of type of hernia or laparoscopic technique used.

There is a paucity of published studies in the literature on laparoscopic parastomal hernia mesh repair with short-term follow-up. However our data, though small in numbers, was comparable with published data on a range of parameters. Conversion to open repair in our series was 0%; Hansson et al. (6) demonstrated that the conversion rates are generally low with 13/363 (3.6%). Our negligible wound infection rates are in keeping with published data. Meta-analysis of all randomized controlled trials performed by Forbes et al. (8) showed significantly lower wound and mesh infection rates in the laparoscopic group. Regarding laparoscopic technique used, the literature is mixed. Hansson et al. (6) demonstrated in a meta-analysis of six studies, the recurrence rate of the laparoscopic Sugarbaker repair was 11.6 % in 110 patients. Recently, Mizrahi et al. (9) published data on the keyhole technique similar to that of Hansson et al. (6). Mizrahi, et al. reported recurrences greater than 40% (9). Wara and Andersen (10) reported a recurrence rate less than 10% in a prospective study of 72 consecutive patients with parastomal hernias (24 para-ileostomy and 48 para-colostomy).

Overall, laparoscopic parastomal hernia repair appears to be a safe and effective approach, with same-day or short inpatient stay achievable in the majority of patients. However, larger randomized controlled trials are needed to assess the efficacy and safety of this approach in the short and longer-term. Trials should also aim to evaluate the different techniques and mesh implants commonly used.

Authors' Contributions

Umar Shariff: data collection, interpretation and writing manuscript, Harmeet Khaira: senior author and surgeon, study supervision.

References

1. Aquina CT, Iannuzzi JC, Probst CP, Kelly KN, Noyes K, Fleming FJ, et al. Parastomal hernia: a growing problem with new solutions. *Dig Surg.* 2014;**31**(4-5):366–76.
2. Londono-Schimmer EE, Leong AP, Phillips RK. Life table analysis of stomal complications following colostomy. *Dis Colon Rectum.* 1994;**37**(9):916–20.
3. Pilgrim CH, McIntyre R, Bailey M. Prospective audit of parastomal hernia: prevalence and associated comorbidities. *Dis Colon Rectum.* 2010;**53**(1):71–6.
4. Nastro P, Knowles CH, McGrath A, Heyman B, Porrett TR, Lunniss PJ. Complications of intestinal stomas. *Br J Surg.* 2010;**97**(12):1885–9.
5. Asif A, Ruiz M, Yetasook A, Denham W, Linn J, Carbray J, et al. Laparoscopic modified Sugarbaker technique results in superior recurrence rate. *Surg Endosc.* 2012;**26**(12):3430–4.
6. Hansson BM, Slater NJ, van der Velden AS, Groenewoud HM, Buyne OR, de Hingh IH, et al. Surgical techniques for parastomal hernia repair: a systematic review of the literature. *Ann Surg.* 2012;**255**(4):685–95.
7. Kald A, Juul KN, Hjortsvang H, Sjodahl RI. Quality of life is impaired in patients with peristomal bulging of a sigmoid colostomy. *Scand J Gastroenterol.* 2008;**43**(5):627–33.
8. Forbes SS, Eskicioglu C, McLeod RS, Okrainec A. Meta-analysis of randomized controlled trials comparing open and laparoscopic ventral and incisional hernia repair with mesh. *Br J Surg.* 2009;**96**(8):851–8.
9. Mizrahi H, Bhattacharya P, Parker MC. Laparoscopic slit mesh repair of parastomal hernia using a designated mesh: long-term results. *Surg Endosc.* 2012;**26**(1):267–70.
10. Wara P, Andersen LM. Long-term follow-up of laparoscopic repair of parastomal hernia using a bilayer mesh with a slit. *Surg Endosc.* 2011;**25**(2):526–30.