CASE REPORT

Advanced rectal cancer in a long-term Hartmann's pouch: a forgotten organ revisited

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SUMMARY

Hartmann's procedure is widely performed as a first-stage operation in cases of left colon emergencies when a one stage management is judged to be unsafe. Forty per cent of patients with Hartmann's procedure never get their stoma reversed, ending with a permanent stoma. The distal excluded Hartmann's pouch is usually forgotten compared to the proximal functioning colon. A 70-year-old man with Hartmann's procedure carried out previously for complicated diverticular disease presented with bleeding per rectum. Invasive adenocarcinoma was confirmed on histology. Subsequent staging revealed a locally advanced rectal cancer. The tumour progressed despite a course of neoadjuvant chemoradiation. The general condition of the patient deteriorated with development of renal failure. The patient died a few weeks later. By reporting this case, we are revisiting the long forgotten Hartmann's pouch to highlight the potential pathologies in the distal stump and to emphasise that a distal stump should not be forgotten even in asymptomatic patients.

BACKGROUND

Since first described by Henri Hartmann in 1921, Hartmann's procedure has gone far beyond its original indication for left colon cancer. Today, Hartmann's procedure is widely recommended as a first-stage operation in cases of left colon emergencies such as obstructing tumours, diverticular disease and trauma, when one-stage management is judged to be unsafe.^{1 2}

The distal excluded Hartmann's pouch is usually forgotten when compared to the proximal functioning colon. What is perceived as minimal symptoms of bleeding or discharge from the distal stump are usually overlooked by patients as well as by clinicians.²

The authors decided to write this report to highlight the potential pathologies in the distal stump even in cases where the original procedure was carried out for benign disease.

CASE PRESENTATION

A 70-year-old man with a Hartmann's procedure carried out 3 years earlier for perforated diverticulitis was referred to our surgical assessment unit, reporting ongoing bleeding per rectum, with occasional clots. The bleeding had gotten worse over the previous couple of months. The patient's stoma was functioning normally and presenting no problems. There was associated abdominal pain and significant weight loss. He had not had a bowel

examination since the surgery. He was not keen to have a second operation to reverse the stoma.

On physical examination, the patient was vitally stable. Abdominal examination was unremarkable, with a healthy colostomy. On rectal examination, a large rectal mass was palpable at the tip of the examining finger.

INVESTIGATIONS

Laboratory data showed haemoglobin 9.5 g/dL and creatinine 116 µmol/L; other values were within normal ranges. Flexible sigmoidoscopy revealed a likely malignant polypoid tumour approximately 8 cm from the anal verge (figure 1); multiple biopsies were taken. The histology reported an infiltrating moderately differentiated adenocarcinoma.

Subsequently, staging CT and MRI of the pelvis showed infiltrating rectal cancer, invading local structures and blocking the left ureter (figure 2).

TREATMENT

The case was discussed at the multidisciplinary meeting; the patient was referred to a colorectal surgeon. The plan was to start neoadjuvant chemotherapy and radiotherapy prior to considering further surgical intervention. The patient had a ureteric stent inserted prior to neoadjuvant treatment.

OUTCOME AND FOLLOW-UP

Restaging following neoadjuvant treatment showed a persistent T4 tumour with new fistulation with the small bowel and involvement of the right ureter with hydroureter and hydronephrosis (figure 3).

In view of these findings, during surgical re-evaluation, it was felt that a radical surgery was

Figure 1 Endoscopic view showing rectal neoplasm at 8 cm.

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Figure 2 MRI pelvis-sagittal (T2 image): bulky proximal and mid rectal neoplasm with thickened mesorectum (before neoadjuvant therapy).

unlikely to achieve an R0 resection. Faced with the deteriorating general condition of the patient and the fact that he had recently finished radiotherapy, the plan was to reassess him again after 6 weeks. Unfortunately, the patient passed away 4 weeks later.

DISCUSSION

According to the current literature, about 40% of patients with Hartmann's procedure do not get their stomas reversed. Patients' condition, progression of the disease and patients' reluctance to undergo a second operation were the main reasons. Thus an intended temporary stoma becomes a permanent one.^{1 2}

Despite the misconception of the pouch as a blind-ended rectum, Hartmann's pouch can extend proximally as far as the

Figure 3 MRI pelvis-sagittal (T2 image): persistent rectal tumour with no interval improvement (after neoadjuvant therapy).

transverse colon; this defunctionalised distal pouch has a high potential for pathological lesions.^{3 4}

Preoperative evaluation of the Hartmann's pouch is a common practice carried out to assess the anatomy and integrity of the distal pouch. This is usually performed through radiological investigations or direct endoscopic visualisation.^{3 4}

Different pathologies have been identified during the preoperative evaluation such as leakage, strictures, diversion colitis and cancer, even in asymptomatic patients.³ In our opinion, this would justify the need for keeping an open mind during evaluation and follow-up of patients with Hartmann's procedure, especially if reversal was not planned.

Diversion colitis, a histological diagnosis supported by endoscopic findings, is one of the relatively common and expected conditions diagnosed in Hartmann's pouch, and most cases are asymptomatic. It has been postulated that such chronic inflammation may increase the risk of malignancy. Thus, some authors have advocated periodic endoscopic evaluation of the Hartmann's pouch even in asymptomatic patients.²⁻⁴

In a study evaluating the distal rectal pouch in patient's with Hartmann's procedure where reversal was not planned, most patients were asymptomatic, and even those with occasional symptoms such as minimal bleeding or discharge did not initially report any symptoms, and did not consider them of any significance.² Cancer was a more common finding in patients where the original procedure was carried out for cancer. However, there are some cases of colorectal cancer diagnosed in the Hartmann's pouch even when the first procedure was carried out for a benign disease.^{2 3 5}

Authors who recommended routine follow-up argued that serious pathologies including cancer were diagnosed in otherwise asymptomatic patients.² However, before recommending a regular follow-up for a Hartmann's pouch, it should be taken into consideration that most of the endoscopic findings were clinically insignificant.

The published literature dealing with the pathologies of the distal stump in patients with long standing Hartmann's procedure included only a small number of patients.^{1 2} The authors' view is that more studies based on a large number of patients are required to determine the incidence of cancer in the Hartmann's pouch in patients with permanent Hartmann's procedure and to introduce guidelines regarding the routine follow-up.

There is no evidence of increased risk or mortality of colorectal cancer in patients with diverticular disease.⁶ However, in the authors' opinion, the altered anatomical and clinical situation in patients with long standing Hartmann's procedure with no planned reversal might lead to delay in diagnosis of pathological conditions, which otherwise would be investigated and diagnosed at an earlier stage.

During our revisit to the forgotten Hartmann's pouch in patients ended with a permanent temporary stoma, we are trying to raise two concerns. First, many patients are not aware of the existence of the distal closed pouch and ignore mild symptoms or consider them insignificant. Second, clinicians, especially general practitioners, may not be aware of the potential pathologies in the excluded rectal stump and do not include it during their physical examination.

In our opinion, because of the special nature and potential problems associated with long-standing Hartmann's pouch, routine follow-up and raising the awareness of patients and healthcare providers may help in early detection with decreased morbidity of such problems.

By reporting this case, we are revisiting the long forgotten Hartmann's pouch to highlight the potential pathologies in the distal stump even in cases where the original procedure was carried out for benign disease.

Learning points

- ▶ Forty per cent of patients who had Hartmann's procedure never got their stoma reversed, ending with a permanent stoma.
- ▶ The distal excluded Hartmann's pouch is usually forgotten when compared to the proximal functioning colon due to their hidden location.
- ▶ Attention must be paid to these pouches through careful examination and endoscopic evaluation.
- ▶ Patients and clinicians should both be aware of the presence and potential pathologies of these pouches.

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REFERENCES

- 1 Banerjee S, Leather AJ, Rennie JA, *et al.* Feasibility and morbidity of reversal of Hartmann's. *Colorectal Dis* 2005;7:454–9.
- 2 Haas PA, Fox TA. The fate of the forgotten rectal pouch after Hartmann's procedure without reconstruction. *Am J Surg* 1990;19:106–11.
- 3 Cherukuri R, Levine MS, Maki DD, *et al.* Hartmann's pouch: radiographic evaluation of postoperative findings. *AJR Am J Roentgenol* 1998;171:1577.
- 4 Weinstein S, Osei-Bonsu S, Aslam R, *et al.* Multidetector CT of the post-operative colon: review of normal appearances and common complications. *RadioGraphics* 2013;33:515–32.
- 5 Nabi H. Rectal adenocarcinoma in prolapsed rectal stump following Hartmann's procedure. *Int J Colorectal Dis* 2015;30:987–8.
- 6 Granlund J, Svensson T, Granath F, *et al.* Diverticular disease and the risk of colon cancer—a population-based case–control study. *Aliment Pharmacol Ther* 2011;34:675–81.

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