Original article

STAR procedure: stapled transanal resection of tumour

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This study assesses the practicality, mortality and morbidity of the STAR procedure for debulking of large rectal tumours prior to transanal endoscopic microsurgery.

Key words: STAR procedure – Rectal tumours – Transanal endoscopic microsurgery

Rectal polyps may be excised by a variety of transanal techniques: (i) the submucosal resection described by Parks and Stuart in 1973;¹ (ii) the parachute technique popularised by Francillon and co-workers in 1974;² and (iii) Faivre's 'Lambeau tracteur' in 1980.³ These local procedures can, however, be technically challenging, access is limited and problems are encountered with regards to bleeding from inaccessible sites. Transanal endoscopic microsurgery (TEM) was first described by Buess *et al.*⁴ in 1983. TEM is a procedure that has a long learning curve, equipment is expensive and TEM itself is extremely difficult for bulky tumours.⁵ We describe a new technique for excising rectal tumours completely or debulking of large tumours prior to a TEM using standard stapling guns; we have called this the stapled transanal resection of tumour, or STAR, procedure.

Patients and Methods

Consent was obtained from all patients who had large benign rectal polyps and were originally listed for a TEM procedure.

All patients had a general anaesthetic and were placed in the lithotomy position. If the polyp could be made to prolapse completely through the anus, it was deemed suitable for a STAR procedure. If the polyp would not prolapse, then a standard TEM was performed.

Figure 1 Staple gun around base of polyp.

A Lonestar retractor was used to facilitate exposure. The polyp was then prolapsed through the anus.

An Ethicon TLC 75-mm staple gun (or more recently the Ethicon TL 60-mm staple gun) was placed at the base of the polyp ensuring 1-cm clearance margins. Traction on

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Figure 2 Resected specimen.

the polyp elevates normal mucosa making this an easy manoeuvre (Fig. 1).

A 2/0-vicryl stitch was placed at the distal apex of the polyp prior to firing of the gun. The stitch was then continued down the staple line for haemostasis. At the end of the procedure, rigid sigmoidoscopy was performed to ensure there was no defect in the rectal mucosa and haemostasis secured.

Figure 2 demonstrates the resected specimen.

Results

We have performed the STAR procedure on 10 patients to date. There has been neither morbidity nor mortality. The procedure takes less than 10 min. Patients are discharged home 48 h after operation.

We have performed the STAR procedure in two patients as a debulking procedure prior to TEM. This facilitated potentially difficult TEM to be performed easily.

Discussion

The STAR procedure is quick, simple and easy to teach. It is recommended for large polyps that can be made to prolapse through the anal canal. It is also recommended as a debulking procedure for large rectal polyps prior to a TEM. This technique has not previously been reported.

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