Technical Section [TECHNICAL NOTES AND TIPS

Novel technique of Mapping Biopsies during laparoscopic assisted transanal Soave endorectal pull-through surgery for Hirschsprung's disease's

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BACKGROUND

Mapping biopsies are a crucial initial step in determining the level of normal ganglionic bowel during various laparoscopic procedures for Hirschsprung's disease. Serosubmucosal biopsies are taken and sent for histopathology. The defects are sutured and the pull-through procedure follows. Complications include mucosal perforation and bleeding. We describe a novel, safe technique that incorporates traditional suction biopsy with laparoscopy.

Figure 1 rbi2 suction rectal biopsy forceps introduced anally under laparoscopic vision

Figure 2 Laparoscopic view of the suction rectal biopsy

TECHNIQUE

Three 3mm ports are inserted: one at the umbilicus and one on each flank. A 3mm 30° laparoscope is inserted via the umbilical port. A standard rbi2 (Aus Systems, Adelaide, Australia) suction rectal biopsy forceps is introduced anally (Fig 1). Under laparoscopic vision, serial submucosal suction biopsies are taken from inside the bowel lumen. These are sent for frozen section after confirming they are of adequate size and quality. The biopsy forceps can be seen through the bowel lumen and is manoeuvred safely into different levels of the distal colon (Fig 2). Various levels are determined and documented, and biopsies are obtained up to the splenic flexure. If the sample is insufficient, a further serosubmucosal biopsy can be performed at a different site along the same circumference with no increase in the rate of perforation.

DISCUSSION

This technique has the advantage of avoiding suturing of the biopsied areas, saving time and reducing the risk of complications. Biopsies obtained at different levels are clearly defined via the laparoscope and can therefore be appreciated during the pull-through procedure. The technique does have the disadvantage of not reaching beyond the splenic flexure. However, most cases of Hirschsprung's disease are distal to the splenic flexure.