Penrose drain guided insertion of a laparoscopic Nathanson liver retractor

A Yasumoto, N Matsumura, R Nomura, H Tokumura
Tohoku Rosai Hospital, Sendai, Japan

CORRESPONDENCE TO

Akihiro Yasumoto, E: akiyasu1127@yahoo.co.jp

BACKGROUND

The Nathanson liver retractor (Cook Medical, Bloomington, IN, US) is a simple method for retracting the left liver lobe during laparoscopic gastrectomy. The retractor is usually inserted into the epigastric region of the abdominal cavity by blunt force.¹ Such an insertion may be difficult in obese patients. We report our Penrose drain guided technique for inserting a Nathanson liver retractor.

TECHNIQUE

Three 12mm and two 5mm ports are used for laparoscopic gastrectomy. After placing all ports except one of the 5mm ports, the second 5mm port is placed in the epigastric region, through which forceps are used to grasp the Penrose drain (outer diameter 8mm; total length 20cm) inserted into the abdominal cavity. After removing the port, half of the drain length is inside and the other half is outside of the abdominal cavity (Fig 1). The retractor is inserted 5cm into the drain (Fig 2) and pushed into the abdominal cavity while the drain is pulled, in a linear manner, using grasping forceps (Fig 3). This procedure enables easy retractor insertion. Subsequently, the drain is removed easily by pulling it lightly.

DISCUSSION

We have used the Nathanson retractor insertion technique, without any complications, in over 50 patients, including obese patients, during laparoscopic gastrectomy. Previous papers have reported Jacques/Nelaton catheter or suprapubic catheter guided retractor insertion.^{2,3} We believe

Figure 1 A Penrose drain is placed such that half of its length is inside and the other half outside the abdominal cavity.

Figure 2 A Nathanson liver retractor is inserted 5cm into a Penrose drain before being pulled into the abdominal cavity.

Figure 3 The Nathanson liver retractor is pushed into the abdominal cavity while the Penrose drain, inserted into the abdominal cavity, is pulled linearly using the grasping forceps.

that our method enables easy insertion of the retractor into the guide drain as well as easy removal of the guide drain after retractor insertion.

References

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