How to avoid a second 10-mm port during laparoscopic appendicectomy and laparoscopic hernia repair

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BACKGROUND

Laparoscopic surgery for the treatment of appendicitis and hernia repair have gained wide clinical acceptance. Trocar-site herniation can occur if a 10-mm trocar is used.¹ Herniation through a 5-mm port site is, however, rare.² The underlying fascia is closed when using trocars of 10-mm or more, but also when extensive manipulation is performed through a 5-mm trocar port, causing extension of the incision. Conventionally, a 10-mm port is required for the camera, whilst a second 10-mm port is needed to retrieve a large appendix during an appendicectomy³ or for the insertion of a 20 cm x 20 cm mesh during hernia repair. We describe a method that avoids the need of a second 10-mm port in both of these cases.

TECHNIQUE

A standard 10-mm umbilical port is used for insertion of the camera. This is followed by two 5-mm ports to allow mobilisation of the appendix and its ligation. Conventionally, one of the 5-mm ports would then be converted to a 10-mm port to allow retrieval of the appendix. We describe a method to avoid this. The appendix is held at one end with a grasper (via the 5-mm port) and passed into the 10-mm trocar (intra-abdominally, under

constant vision) following the tip of the camera whilst the camera is reversed out of the 10-mm trocar (Fig. 1). Similarly, when inserting the mesh for hernia repair, a 5-mm port allows the passage of a 15 cm x 15 cm mesh but needs to be converted to a 10-mm port to allow a larger mesh to be passed through (as the trocar is too narrow). Instead, the grasper, which is through the 5-mm port, is passed into the 10-mm trocar (intra-abdominally) following the camera tip as it is reversed out of the trocar (Fig. 1). Once, the grasper is through the 10-mm trocar, the trocar is removed leaving the grasper pointing out of the abdomen. A mesh is placed in the grasper which is then pulled back into the abdominal cavity.

DISCUSSION

We have successfully performed this technique on numerous occasions. It avoids the need of a second 10-mm port (and the need to close it). This facilitates safe and efficient removal of an appendix during an appendicectomy or insertion of a mesh during hernia repair. This method does not require a 10-mm telescope to be changed to a 5-mm one (as not all hospitals have one) or the need to extend a 5-mm port incision.⁴

References

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Figure 1 Demonstrating the grasper (via 5-mm trocar) entering the mouth of the 10-mm trocar following the tip of the camera.

Knee traction technique for inserting an antibiotic spacer

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BACKGROUND

The two-stage revision of infected total knee replacement includes inserting an antibiotic cement spacer. The conventional