Figure 4 Biopsy tissue being removed from the harvester using a trocar

Discussion

This is a simple, inexpensive, and safe method of harvesting tissue from the acetabular roof for biopsy, and allows early and rapid post-operative recovery.

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Z-entry technique reduces the risk of trocar-site hernias in obese patients

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doi 10.1308/rcsann.2016.0114

BACKGROUND

Open laparoscopy and techniques using a Veress needle permit entry into the peritoneal cavity, and are recommended.^{1,2} These approaches require fascial closure of 12mm trocar sites, thereby reducing the risk of trocar-site hernias in obese patients.^{3,4}

TECHNIQUE

We propose a novel ‘Z-entry’ technique to enter the abdominal cavity under direct vision of an optical trocar that (theoretically) can reduce the risk of trocar-site hernias in obese patients. After induction of a pneumoperitoneum through a Veress needle, a 12mm optical trocar system is inserted with a 30° laparoscope. Under direct laparoscopic vision, the trocar is inserted in subcutaneous fat in a perpendicular

Figure 1 Trocar placement using the Z-entry technique. **A)** The trocar is inserted in a perpendicular direction through the anterior sheath plane by applying traction to the skin with towel clips. **B)** Movement at 45° is made through the muscular plane. **C)** Trocar is inserted through the posterior sheath plane, preperitoneal fat, and peritoneum at 90°. Insets show the operative view.

direction through the anterior rectus muscle sheath (Fig 1A) and then advanced at 45° through the muscular plane (rectus abdominis muscle or flat abdominal muscles; Fig 1B). A distance of 1.5–2cm from the skin incision is obtained, and the abdominal wall is entered at 90° (Fig 1C). The anatomical structures encountered are readily recognisable by the optical trocar system. At the skin incision, the towel clips holding the abdominal wall should be dragged upwards to achieve the correct distance between the two perpendicular openings.

DISCUSSION

The distance between two openings in the muscular fascia reduces the risk of trocar-site hernias because of the angled path through the abdominal wall. We also use this technique in patients who have undergone surgery previously (a shielded trocar should be used in such cases). This technique is advised for positioning of trocars in pararectal regions and the lateral abdominal wall. A sufficient muscular plane dividing anterior and posterior sheaths is needed.

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A method for rapid laparoscopic irrigation

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doi 10.1308/rcsann.2016.0120

BACKGROUND

One of the disadvantages of high-volume peritoneal toilet, if undertaken via a laparoscopic approach, is that the irrigation-and-suction device is a combined instrument that limits the ability to achieve high-volume washout in a timely manner.

Figure 1 The suction tubing is connected to the insufflation inflow of the laparoscopic port and is controlled by the valve mechanism. If the port tip is kept beneath the waterline, then rapid, high-volume irrigation can be carried out with simultaneous suction.

TECHNIQUE AND DISCUSSION

A laparoscopic port is used as a separate suction channel by connecting the suction tubing to the insufflation valve (Fig 1). This strategy allows simultaneous high-volume irrigation with continuous suction if the port tip is kept below the 'waterline', thereby providing more thorough and rapid washout.

Combination of a drainage tube and fenestrated topical negative-pressure device for the management of Morel–Lavallée lesions

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BACKGROUND

Morel–Lavallée lesions (MLLs) are post-traumatic, closed degloving injuries that occur as a result of the separation of subcutaneous tissue from the underlying fascia.¹ Management of MLLs is complex.² We report a technique that combines drainage tubes and topical negative pressure (TNP) therapy for early management of MLLs.

TECHNIQUE

After undertaking seroma evacuation and debridement, TNP foam is prepared along with drainage tubes and trocars (Fig 1).

TNP foam is fenestrated into a finger-like shape but with preservation of a broad base that connects the multiple limbs (Fig 2). Trocars connected to a drainage tube are inserted along the length of each limb from the tip towards the base (Fig 3). The free end of the drainage tube is left ≈15cm out of the foam. The other end of the

Figure 1 Instruments required for configuration of a topical negative pressure (TNP) device. Pictured on the right are the TNP foam, tube and adhesive drape (VAC® Therapy System; KCI USA, San Antonio, TX, USA). Pictured on the left are drainage tubes and trocars (Van Straten Medinorm, Spiesen, Germany).