Surgical access to the abdomen in general surgery

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Access to the abdominal cavity can be achieved in many ways and the exposure required will depend on the surgical pathology anticipated, procedure performed and expertise of the surgeon (Summary box 7.4). Summary box 7.4 Surgical exposure of the abdomen /uni25CF /uni25CF /uni25CF /uni25CF /uni25CF /uni25CF /uni25CF /uni25CF Scalpel versus diathermy? Abdominal incisions can be made using a scalpel or diathermy . Recent data suggest that there is no di ff erence with regards to SSI, blood loss or operative time between the two; however, using diathermy resulted in a lower requirement for postoper ative analgesia. Usually , it is down to the surgeon’s preference as there appears to be no clinically discernible di ff erence. Transverse versus longitudinal? Transverse incisions result in less pain, better pulmonary function and fewer incisional hernias but have higher wound infection rates. However, as a rule of thumb, the midline Harrith Hasson , 1931–2012, Professor of Gynaecology , Chicago, IL, USA. Janos Veress , 1903–1979, surgeon, Hungary . laparotomy is preferred for most emergency procedures as this is quicker to perform and is more versatile. The steps in performing a midline laparotomy are detailed . This below . Ever y incision should be made with closure in mind and based on the suspected site of pathology: an upper mid- line , lower midline or mid-midline laparotomy incision can be made and extended as required. 1 The first step is to make a skin incision using landmarks such as the xiphisternum, umbilicus and pubic symphysis as reference (Figure 7.9a) . 2 The subcutaneous tissue is then dissected away , exposing the rectus and the linea alba (Figure 7.9b) . 3 The linea alba is longitudinally incised close to the umbil - ical cicatrix to prevent straying into the rectus sheath on either side, thereby exposing the pre-peritoneal fat (Figure 7.9c) . 4 The pre-peritoneal fat is divided carefully and the perito - neum is picked up between two haemostats and incised using scissors (Figure 7.9d). 5 Once the peritoneum is entered, the surgeon’s fingers are usually inserted into the peritoneal cavity and the desired length of the peritoneal cavity is opened (Figure 7.9e) . Re-entry incisions Avoid railroading and criss-crossing incisions as they can lead to skin necrosis; it is better to make an incision through the previous scar or excise the scar in total. Extending the skin incision past the previous scar to enter the peritoneal cavity at a virgin plane may help avoid inadvertent injury to the underlying viscera, which may be adherent to the scar.

Open surgical exposure Intraperitoneal access Longitudinal Transverse Oblique Pelvic Retroperitoneal access – /f_l ank incision Multicompartment access – thoracoabdominal incisions Laparoscopic exposure Multiport, single port, hand-assisted laparoscopy X Y Y X Y

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