Surgical management of pleural effusions and infec

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Thoracoscopy or video-assisted thoracoscopic surgery (VATS) The direct-vision thoracoscope has been used for many years, but its use was limited mainly to performing biopsies. Since the advent of video-assisted thoracoscopy (Figure 60.9) the surgeon’s hands are now free because the camera is attached to the thoracoscope, which can be operated by an assistant with the image displayed on a screen. The surgeon is able to manipulate instruments with both hands to perform a variety of procedures. The number of ports required depends on the type and complexity of the surgery . The patient is usually positioned with the diseased side uppermost, having had a double-lumen endotracheobronchial tube (ETT) placed by the anaesthetist to allow for single-lung ventilation. The principal). The - -

Figure 60.9 V i d e o - a s s i s t e d t h o r a c o s c o p i c s u r g e r y (V A T S) u t i l i s e s modern thoracoscopic instruments and digital technology and avoids large incisions.

postoperative pain and a more rapid recovery . VATS drainage, pleural biopsy and talc pleurodesis V ATS drainage, pleural biopsy and talc pleurodesis is increas ingly performed for the management of patients with an undi agnosed or malignant pleural e ff usion. It can be performed using a single port and allows direct visualisation of the pleural cavity for complete drainage, multiple pleural biopsies and excellent talc insu ffl ation to achieve pleurodesis. VATS debridement of empyema Pleural infection, particularly early in its evolution, requires drainage, but once the fluid component becomes fibrinopu rulent and loculated it requires surgical debridement, which can often be achieved through a V ATS approach. The lung is isolated through the use of a double-lumen tube, the patient is positioned disease side up and the pleural cavity is entered. T he fluid and debris are vigorously debrided, freeing the lung and allowing for re-expansion. At the end of the case, carefully positioned chest drains are placed to allow for dependent drainage. Following the procedure, the patient requires good analge sic control, typically using patient-controlled analgesia (PCA), and physiotherapy to help fully re-expand the lung prior to final removal of chest drains. Decortication If the lung fails to re-expand after drainage of the empyema, the more radical operation of decortication may be required (Figure 60.10). The fibrous cortex or peel from the entrapped underlying lung is removed so that the lung can expand to obliterate the pleural space. This is usually performed through a posterolateral thoracotomy , though in selected cases it can be performed as a V ATS procedure. It requires careful dissection to remove the parietal and visceral cortex, taking care not to damage the visceral pleura, so allowing the lung to re-expand fully .

Figure 60.10 Chest computed tomography scan showing an empy ema with a grossly thickened pleura (arrow).

Revision #1
Created 2025-12-31 15:22:55 UTC by Omar Ayman
Updated 2025-12-31 15:22:55 UTC by Omar Ayman