31 Open Posterior Adrenalectomy

Dimitrios A. Linos

31.1 Position

The patient is turned to the prone position after intubation. Pillows or blankets are placed underneath the chest and pelvis allowing the peritoneal organs to fall away from the retroperitoneum. The table is flexed into the jackknife position to eliminate lumbar lordosis. The knees are flexed and the lower legs supported with soft pillows.

![Fig. 1](image1)

31.2 Incisions

The classical Young curvilinear incision extending from the 10th rib (4–5 cm from the midvertebral line) to the iliac crest (8–10 cm from the midvertebral line) is usually used. Nevertheless, since the adrenal gland lies beneath the origin of the 12th rib from the vertebral body, a single straight incision over the 12th rib with a small vertical upward extension, if needed, is adequate in most cases.

![Fig. 2](image2)

31.3 Step I: Resection of the 12th Rib

The first step of the posterior approach is resection of the 12th rib (or the 11th rib in the rare case that the 12th is rudimentary). To get there the latissimus dorsi and the lumbodorsal fascia are cut with diathermy and the sacrospinalis muscle is retracted medially. Using the diathermy and the periosteal elevator the rib is removed subperiosteally all the way up to its junction with the vertebral body. Care is taken to avoid injuring the underlying pleura and the subcostal nerve.
31.4 Step II: Reflection of the Pleura

The second step is to reflect upward the pleura that lie immediately beneath the resected rib. This is done carefully with blunt or sharp dissection, but occasionally holes are made in the pleura. They should be recognized and repaired at this point. The underlying pleura diaphragm can be either divided using diathermy or retracted upward to expose the underlying adrenal and upper pole of the kidney.