

Iatrogenic Pneumothorax Following Nephrectomy: Case Report

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Introduction

Iatrogenic pneumothorax is a rare but serious complication of nephrectomy, especially during open procedures involving subcostal or lombotomy approaches. The anatomical proximity of the kidney, particularly the left upper pole, to the pleura and diaphragm increases the risk of pleural injury. We report a rare case of symptomatic postoperative pneumothorax following left nephrectomy in a young patient, highlighting the diagnostic challenges and therapeutic strategies.

Case Report

A 22-year-old Mauritanian woman with no relevant medical or surgical history presented with chronic intermittent left-sided lumbar pain. Imaging revealed severe left hydronephrosis due to ureteropelvic junction obstruction, with significant parenchymal thinning and no evidence of stones. A non-functional kidney led to the decision to perform a left nephrectomy via subcostal lombotomy.

During surgery, a pleural breach was identified and sutured after lung expansion under positive pressure ventilation. On postoperative day 2, the patient developed acute left-sided chest pain and respiratory distress. Clinical examination revealed signs consistent with a large left-sided pneumothorax. Thoracic CT confirmed the diagnosis. The patient was immediately managed with chest tube drainage, which ensured evacuation of intrapleural air and represented a critical lifesaving intervention in this context. A small-bore anterior drain connected to suction was inserted, resulting in rapid clinical improvement. The drain was removed on day 5. On day 7, upon referral to the pneumology unit, the patient was clinically stable, but chest X-ray revealed a partial residual pneumothorax with minimal effusion. A conservative management strategy with oxygen therapy was adopted. Full re-expansion of the lung was observed by day 10.

Conclusion

Iatrogenic pneumothorax after nephrectomy is rare but clinically significant. Lifesaving chest tube drainage may be required in acute cases, while conservative management can suffice in stable patients, underscoring the importance of early recognition and tailored treatment.

Keywords

Iatrogenic pneumothorax; Nephrectomy; Postoperative complication; Conservative management