




Intra-thoracic migration of a gallstone and its thoracoscopic management

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Abstract

Intra-thoracic migration of a gallstone spilled during laparoscopic cholecystectomy is an extremely rare complication. This is a video documenting the successful thoracoscopic management of a patient who presented with this entity.

Keywords Spilled gallstone · Thoracoscopy · Video-assisted thoracic surgery

The incidence of perforation of the gallbladder during laparoscopic cholecystectomy varies between 1.4 and 40% and that of subsequent spillage of gallstones between 2.3 and 40% [1]. Intra-thoracic migration of spilled gallstones is a rare complication. It is thought to result from a subphrenic abscess that leads to a fistulous tract through the diaphragm into the pleural cavity [2].

A 48-year-old woman who had undergone a laparoscopic cholecystectomy 2 years previously presented with recurrent episodes of hemoptysis starting 6 months after surgery. Initial imaging done elsewhere had suggested a bleeding vascular malformation in the right lower lobe, and this was treated with an inferior phrenic artery embolization. A repeat computerized tomographic angiogram performed upon the recurrence of the hemoptysis a month after the embolization revealed a well-defined, hyperdense shadow within consolidated right lower lobe suggestive of a gallstone (Video 1). At thoracoscopy performed under single-lung ventilation using three ports (12 mm, 10 mm, and 5 mm); dense adhesions were observed between the right lower lobe and the diaphragm. After freeing up, a wedge of the

adherent portion of the lung was resected using endoscopic staplers. A small portion of the diaphragm that appeared unhealthy was also excised and the resultant defect closed with non-absorbable sutures. The specimen was extracted in a plastic bag and, upon slicing, revealed a large pigmented gallstone (Video 1). An intercostal drainage tube was inserted and placed on a negative suction drainage. This allowed the lung to expand rapidly and the patient to be discharged on 3rd postoperative day. She remains well 2 years later.

This case highlights the importance of (a) meticulous retrieval of all spilled gallstones, (b) maintaining a high index of suspicion for the possibility of this rare complication in patients presenting with right pleuro-pulmonary complications following laparoscopic cholecystectomy, and (c) thoracoscopy as a valid minimal access therapeutic option.

Compliance with ethical standards

Conflict of interest The authors declare that they have no conflict of interest.

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