

Post-traumatic biliobronchial fistula demonstrated on hepatobiliary scintigraphy with SPECT/CT

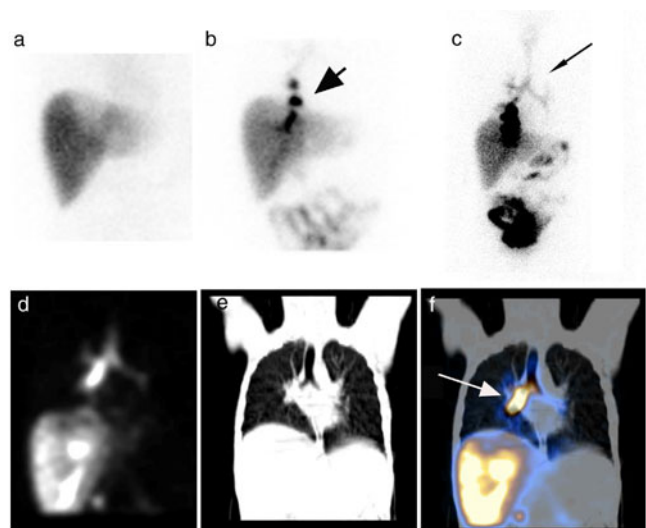
Anish Bhattacharya · Koramadai Karuppuswamy Kamaleshwaran · Chidambaram Natarajan Balasubramaniam Harisankar · Kuruva Manohar · Mohammed Labeeb Abrar · Bhagwant Rai Mittal

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A 22-year-old male patient suffered a grade IV liver injury with haemoperitoneum in a roadside accident 2 months earlier, for which laparotomy and biliary stenting were done. However, after a few days, the stent was passed during defecation. A week later, the patient developed intractable cough with copious expectoration of green sputum. Chest X-ray showed right-sided pleural effusion with consolidation in the right lower lobe. Sputum examination confirmed the presence of bile, which raised the suspicion of a biliobronchial communication.

[^{99m}Tc]Mebrofenin hepatobiliary scintigraphy (HBS) showed preserved function in the right lobe of the liver and impaired uptake in the left lobe (a). Static planar images from 45 min to 2 h (b, c) showed unobstructed biliary drainage into the intestine caudally, with a streak of tracer passing cranially into the chest cavity (arrowhead) and subsequently taking the shape of the central airways (arrow). Hybrid SPECT/CT imaging (d, e, f) identified radiotracer in the bronchi and trachea (arrow).

Bronchobiliary fistula is an unusual complication of thoracoabdominal trauma [1, 2]. Clinically, patients present with fever, dyspnoea, cough and bilioptysis. The latter is pathognomonic of fistula formation, and large volumes of bright yellow sputum may be encountered [3]. Previous studies have shown planar HBS to be a reliable non-invasive investigation to identify post-traumatic biliopleural and biliobronchial communications [4, 5]. In this case,



SPECT/CT clearly defined the fistulous tract from the right lobe of the liver to the respiratory tract.

Conflicts of interest None.

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A. Bhattacharya (✉) · K. K. Kamaleshwaran · C. N. Balasubramaniam Harisankar · K. Manohar · M. L. Abrar · B. R. Mittal
Department of Nuclear Medicine,
Postgraduate Institute of Medical Education & Research,
Chandigarh 160012, India
e-mail: anishpgi@yahoo.co.in