

Broncho-Pleuro-Cutaneous Fistula at Intercostal Chest Drain Site in a Patient having Silicotuberculosis

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CASE SUMMARY

A 30-year-old male presented to the outpatient department with complaints of shortness of breath and the presence of a persistent opening in the right infra-axillary region. The patient reported that air seemed to move in and out of this opening with each breath. There was no history of recent trauma, fever, hemoptysis, or chest pain preceding the presentation.

The patient had a significant past history of right-sided pyothorax, for which an intercostal chest drain (ICD) had been inserted five months earlier. The ICD remained in situ for approximately two months and was removed three months prior to the current presentation. Since then, the patient had been undergoing anti-tuberculosis treatment with regular drug intake for the preceding five months.

On general examination, the patient was conscious, oriented, and in mild respiratory distress. The trachea was noted to be slightly deviated to the left. Vital parameters were stable at the time of evaluation. Local examination of the chest revealed a circular opening at the previous ICD insertion site in the right infra-axillary area (Figure 1). Movement of air through the opening synchronized with the patient's respiratory cycle was easily appreciable on inspection and palpation. Chest palpation demonstrated decreased chest expansion on the right side. Percussion revealed a hyper-resonant note over the right hemithorax. Auscultatory findings included amphoric breath sounds, markedly reduced breath-sound intensity on the right side, and a distinct succussion splash, suggestive of the presence of an air-fluid interface within the pleural cavity.

Based on these findings, a right-sided hydropneumothorax was suspected. A chest radiograph confirmed a large



Figure 1: Photograph of patient showing fistulous opening at the previous intercostal chest drain site.



Figure 2: X-ray chest PA view showing right-sided hydropneumothorax with chest drain in situ and underlying silicosis-tuberculosis lesions.

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Website: uapmjournals.in

DOI: 10.70192/v3.i2.06

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How to cite this article: Mathur S, Dixit R. Broncho-Pleuro-Cutaneous Fistula at Intercostal Chest Drain Site in a Patient having Silicotuberculosis. UAPM J. Respiratory Diseases Allied Sci. 2026;3(2):30-31.

Received: 05-05-2026, **Accepted:** 19-05-2026, **Published:** 15-06-2026

hydropneumothorax on the right side with a clear air–fluid level and underlying lung disease (Figure 2). The clinical picture was consistent with a broncho-pleuro-cutaneous fistula developing through the previous ICD tract, leading to continuous air leak and respiratory compromise.

The patient was managed with reinsertion of an ICD on the right side, but through a new site located inferior to the previous scar, ensuring avoidance of the compromised tract. The drain achieved adequate air and fluid evacuation. Oxygen therapy and supportive care were initiated, alongside continuation of anti-tuberculosis therapy. Despite timely intervention, the patient's condition deteriorated progressively. He developed worsening respiratory failure and succumbed two days after admission.

Pleuro-cutaneous fistula is an uncommon complication of chronic empyema, tuberculosis, or prior chest tube insertion, and a visible external air leak synchronized with breathing should prompt urgent evaluation and drainage.^{1,2}

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