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Case Report

Duodenal-bronchial fistula: an unusual cause of shortness of breath and a productive cough

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ABSTRACT

Duodenal-bronchial fistulas are very uncommon, even among the already rare subgroup of abdominal-bronchial fistulas. We describe a case of a woman with Crohn's disease who presented with shortness of breath and a productive cough who was found to have a duodeanl bronchial fistula on computed tomography scan. We demonstrate with this case how these rare cases can lead to chronic lung aspirations and require multidisciplinary involvement.

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Case report

A 63-year-old woman with Crohn's disease presented with worsening shortness of breath and a productive cough with green sputum. A computed tomography of the thorax/abdomen/pelvis with intravenous and oral contrast revealed a fistula between the duodenum, the bare area of the liver, the pleura, and the right middle lobe, which could be appreciated in axial (Fig. 1), sagittal (Fig. 2), and coronal (Fig. 3) planes in a soft tissue window. This duodenal defect feeding the fistula was approximately 5 mm. The lung adjacent to the region of mixed consolidation and collapse showed clusters of tree-in-bud micronodules, commonly associated with aspiration. The right middle lobe was also seen to be collapsed with consolidation and an abscess measuring 5 × 3 cm, which could be appreciated along with the fistula and the tree-in-bud micronodules in the axial plane in a lung window (Fig. 4).

She was started on oral amoxicillin/clavulanic acid and metronidazole by the respiratory physicians. She was already on 5 mg of prednisolone and was due for follow-up with the gastroenterologists. Upper gastrointestinal surgeons were contacted to discuss further management options. With her inflammatory markers decreasing, she was discharged and advised to return if she experienced any red flag symptoms.

Discussion

Duodenal-bronchial fistulas are very uncommon, even among the already rare subgroup of abdominobronchial fistulas, with few reports in the previous literature [1–3]. They typically present with a characteristic bilious cough, dyspnea, and fever [1,2]. Similar abdominal-bronchial fistulas have been described in cases of Crohn's (similar to this case), colonic carcinoma, colitis,

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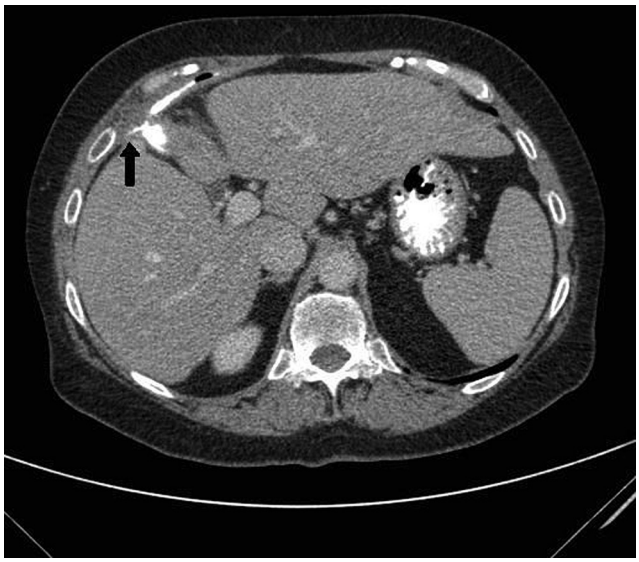

Fig. 1 – Axial view in soft tissue window with arrow showing leaking of duodenal contrast into the more lateral pleural spaces on the right side.

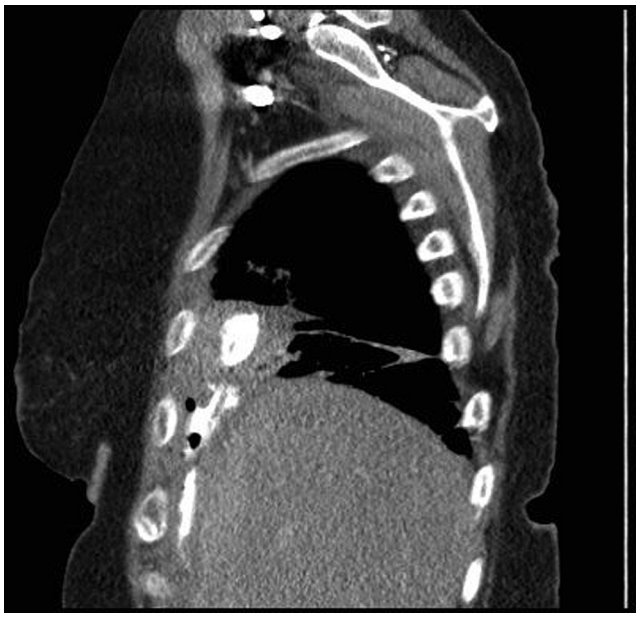

Fig. 2 – Sagittal view in soft tissue window showing contrast from the duodenum spilling upward into the pleura.

tuberculosis, appendicitis, and after penetrating or tearing injuries [2,3]. This patient was arranged for further investigation with endoscopy to evaluate the characteristics of the fistula and to determine suitability for surgical intervention, as these patients may be prone to obstruction or even death [2,3].

REFERENCES

[1] Heitmiller RF, Yeo CJ. Duodenobronchial fistula. Surgery 1991;110(3):546–8.

Fig. 3 – Coronal view in soft tissue window with arrow showing right-sided duodenal fistula causing leakage of contrast upward into the pleura.

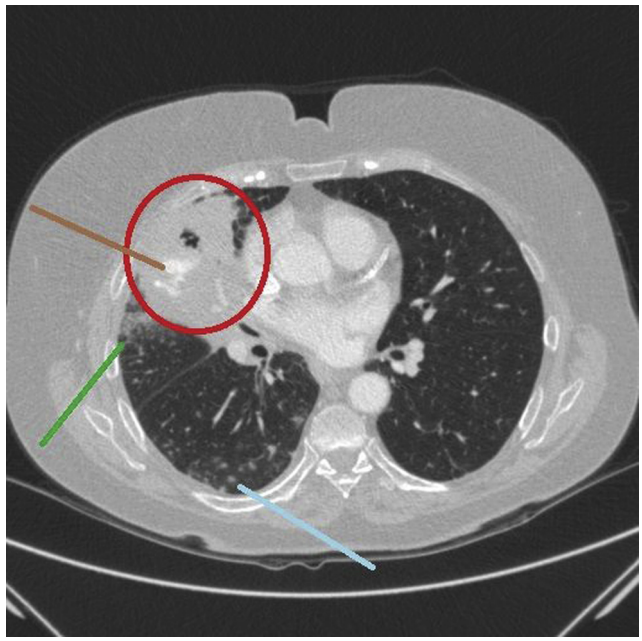

Fig. 4 – Axial view in lung window showing collapsed middle lobe within the red circle with cavity containing oral contrast from the fistula (brown line). The green line shows adjacent consolidation and blue line shows tree-in-bud appearances from aspiration.

[2] Sahu SK, Singh NK, Singh S, Kumar A, Agarwal A, Bijalwan P, et al. Colobronchial fistula: a rare cause of chronic cough. Natl Med J India 2011;24(6):345–6.

[3] Dager-Fadal WL, Sanchez-Cano D, Borrego-Borrego R, Calderon OF, Gonzalez-Ruiz FJ, Perez-Romo A, et al. Duodenal-bronchial fistula one month after a gunshot wound. Conference: 20th Annual Meeting of the Asian Society of Cardiovascular and Thoracic Surgery, At Bali, Indonesia. Feb 2015.