

Kartagener syndrome

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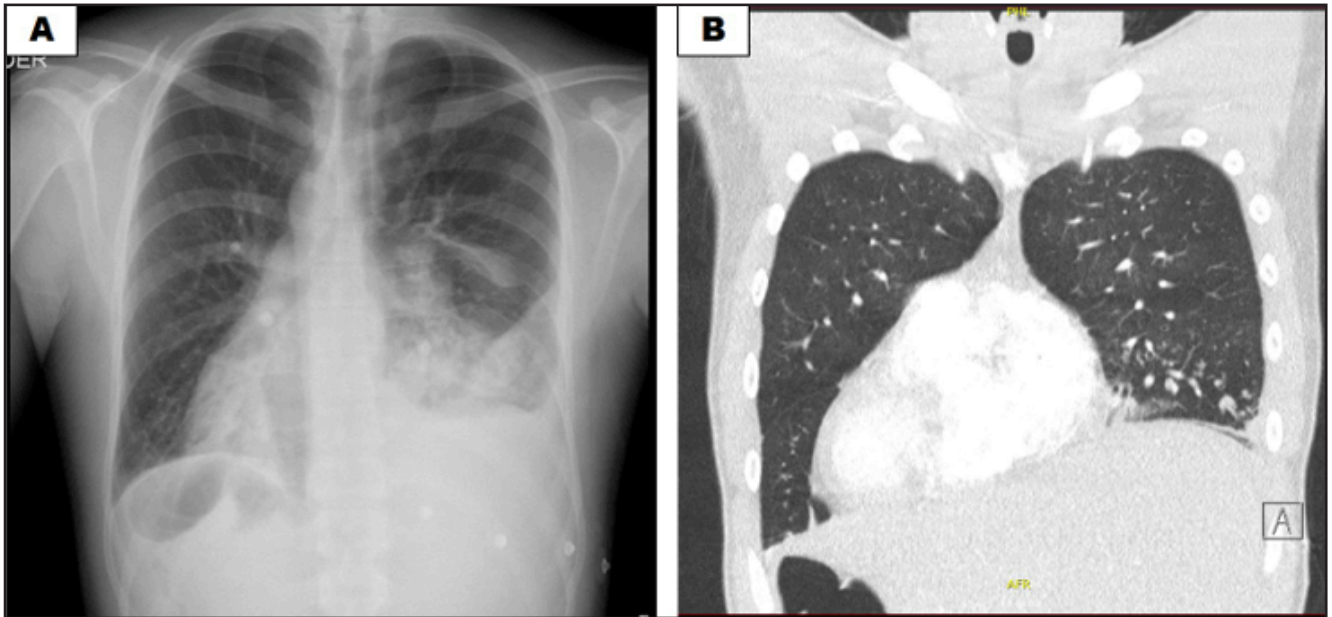


Figure 1. A: anterior-posterior chest x-ray showing alveolar opacity in the left lower lobe, ipsilateral pleural effusion and signs of volume loss with hemidiaphragmatic retraction, dextrocardia and a right-sided gastric chamber. **B:** chest tomography, coronal plane, showing complete situs inversus: heart and stomach to the right and liver to the left.

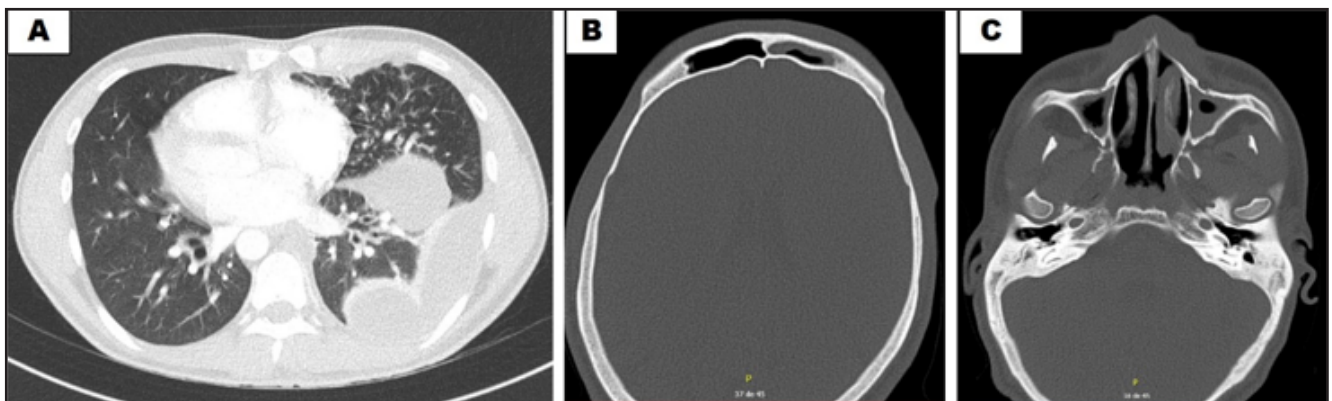


Figure 2. A: chest tomography, axial plane, with left pleural effusion, peribronchial thickening and bilateral bronchiectases, some with a mucous plug. **B:** paranasal sinus tomography showing frontal sinusitis. **C:** bilateral ethmoid and maxillary.

A 23-year-old man with a history of recurrent sinusitis was admitted for pleuritic pain and fever. His tests showed left empyema, *situs inversus*, bronchiectasis and sinusitis (Figures 1 and 2). He was diagnosed with Kartagener syndrome, and required antibiotic and surgical treatment for his empyema, with clinical improvement. A nasal ciliary biopsy was compatible with ciliary dyskinesia.

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Kartagener syndrome is an autosomal recessive hereditary disorder, a subset of primary ciliary dyskinesia, characterized by the triad of chronic sinusitis, bronchiectasis and *situs inversus* (1). The recommended diagnostic criteria include a history of chronic bronchial infections and rhinitis since childhood, with one or more of the following: (a) *situs inversus* or dextrocardia in the patient/sibling, (b) live but immotile spermatozoa, (c) absent or abnormal tracheobronchial clearance, and (d) a characteristic ciliary ultrastructural defect on electron microscopy (2). Management is multidisciplinary, with physical therapy, antibiotics, vaccinations and lung transplant in advanced disease recommended (1, 3).

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