

Membranous croup (exudative tracheitis or membranous laryngotracheobronchitis)

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An 11-year-old girl presented with a 1-week history of cough and high fevers acutely complicated by sore throat and air hunger. Radiographs demonstrated narrowing of the subglottic airway on the frontal view (Fig. 1, *black arrow*) and multiple, linear tracheal irregularities evident only on the lateral view (Fig. 2, *white arrows*), highlighting the importance of both views. Endoscopy confirmed friable

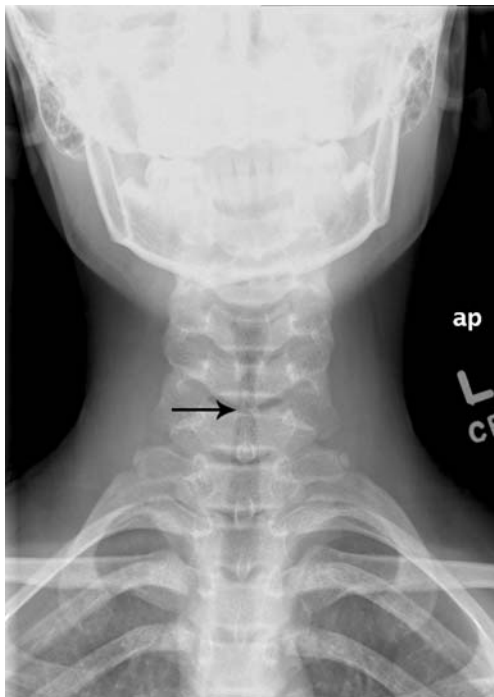


Fig. 1 Radiograph, frontal view

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Fig. 2 Radiograph, lateral view

subglottic mucosa with purulent green exudate with membranes, but a patent airway. Antibiotics were initiated and the airway was maintained without further intervention.

Membranous croup is an uncommon but severe purulent upper airway infection [1]. Radiographically, the diagnosis should be suspected in older children presenting with croup-like subglottic narrowing and tracheal irregularity or plaques (classically linear membranes). Rarely, children may present with a pneumomediastinum [2]. Foreign bodies or adherent mucous may mimic tracheal membranes, but a toxic clinical picture helps differentiate. Prompt diagnosis is key because the condition is potentially life-threatening, with the child often requiring emergent endoscopic airway management.

References

1. Denny JC III, Handler SD (1982) Membranous laryngotracheobronchitis. *Pediatrics* 70:705–707
2. Hedlund GL, Wiatriak BJ, Pranikoff T (1998) Pneumomediastinum as an early radiographic sign in membranous croup. *AJR* 170:55–56