Radiologic Diagnosis

43-year-old man

Asthmatic with progressive dyspnea

Normal cardiac function

---

Answer

Swyer-James (Macleod) Syndrome

Chest radiograph

- Hyperlucency of the left lung with associated reduced vascularity and decreased lung volume.

- High-resolution CT (HRCT).

Bronchiectasis, decreased attenuation and vascularity.

Swyer-James (McLeod) syndrome is a condition characterized by bronchiolitis obliterans involving predominantly one lung or, less commonly, a lobe or segment. It typically follows an early childhood infection, most commonly a viral pneumonia.

The characteristic radiographic manifestations include:

1. Hyperlucency of the involved lung or lobe.
2. Decreased vascularity.
3. Small hilum.
4. Decreased volume of the involved lung or lobe.
5. Air trapping on expiratory radiographs.

High resolution CT demonstrates similar findings as the radiograph but is superior to radiography in demonstrating the presence of

bronchiectasis in the involved lung. High resolution CT also frequently shows mild abnormalities in the contralateral lung.

The patients are usually asymptomatic. Symptoms when present include dyspnea on exertion and recurrent infection.

The main differential diagnosis on the radiograph is with central bronchial obstruction by a tumor or foreign body. Central bronchial obstruction can be readily excluded with CT or bronchoscopy. The presence of air trapping on expiratory radiography or CT allows distinction of Swyer-James syndrome from congenital hypoplastic lung and other congenital vascular causes of unilateral decreased vascularity.

---

Bibliografia

1. Armstrong P, Wilson AG, Dee P, Hansell DM. Imaging of Diseases of the Chest. 2nd edition. Mosby. St. Louis 1995
2. FraserRS, Müller NL, Colman N, Paré PD. Diagnosis of Diseases of the Chest. 4th edition. WB Saunders Company. Philadelphia 1999
Webb WR, Muller NL, Naidich DP.High-Resolution CT of the Lung. 3rd edition. Lippincott-Raven. Philadelphia