Image in Medicine

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Quiz 1

CT scan images of the chest of a 24 year old male presenting with cough and weight loss.
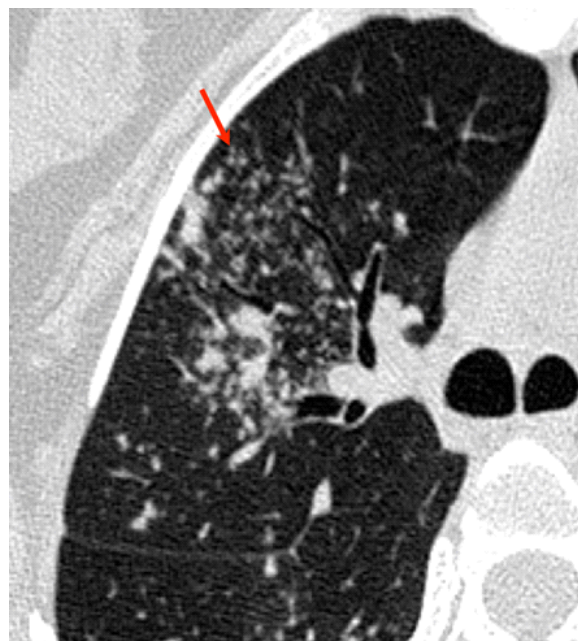
> **Questions :**
> (1)   What is the diagnosis?
> (2)   What is the pathophysiology of this pattern?
> (3)   How to identify this pattern on HRCT scan?

Answers :

(1) Mutiple discrete centrilobular nodules with linear branching pattern (arrow) are seen, representing tree-in-bud appearance. These imaging findngs are most commonly seen in pulmonary tuberculosis.

(2) Tree-in-bud appearance represents an endobronchial spread of infection, given the proximity of small pulmonary arteries and small airways.

(3) Using maximum intensity projection (MIP) images facilitates detection of centrilobular nodules and their branching appearance.

Quiz 2

Radiograph of chest of a 20 day old neonate who presented with dyspnea and cyanosis.

> **Questions :**
>
> (1)   What is the diagnosis?
> (2)   What is TAPVR?
> (3)   What forms the snowman appearance on chest radiograph?

Answers :

(1) There is widening of superior mediastinum, the configuration of heart and superior mediastinal borders resembling a snowman. This is seen in total anomalous pulmonary venous return (TAPVR) (Supracardiac type). It is also referred to as the "figure of 8 sign".

(2) Total anomalous pulmonary venous return (TAPVR) is a cyanotic congenital heart anomaly with abnormal drainage of entire pulmonary venous system.

All systemic and pulmonary venous blood enters the right atrium and nothing drains into the left atrium. A right to left shunt is required for survival and is usually via a large patent foramen ovale or atrial septal defect.

(3) The dilated vertical vein on the left, brachiocephalic vein on top and the superior vena cava on the right form the head of the snowman, while the body of the snowman is formed by the enlarged right atrium.

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