

Contrast-enhanced three-dimensional MRA in the evaluation of multiple pulmonary arteriovenous malformations: MIP reconstruction.

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Section: Chest imaging

Imaging Technique: MR-Angiography

Case Type: Clinical Cases

Authors: R. Brillo, A. Napoli, R. Iannaccone, M. De Santis

Patient: 25 years, female

Clinical History:

Recurrent episodes of hemoptysis, blood desaturation and with familiar history of Osler-Weber-Rendu disease.

Imaging Findings:

A 25 y.o. woman with recurrent episodes of hemoptysis, blood desaturation and with familiar history of Osler-Weber-Rendu disease. Physical examination of the thorax showed bilateral, diffuse bruits; she underwent ce MRA to rule out possible vascular pulmonary involvement of O-W-R disease.

Discussion:

Pulmonary arteriovenous fistulas (PAVFs) are rare vascular malformations of the lung and are most frequently congenital, usually associated with familial hemorrhagic telangiectasia (Rendu-Osler-Weber disease). Although most patients are asymptomatic, PAVFs can cause dyspnea due to right-to-left shunt. They can also bleed and result in hemoptysis and hemothorax. Because of paradoxical emboli, various central nervous system complications have been described including stroke, and brain abscess. Spiral CT scan (SCT) may allow to detect pulmonary arteriovenous malformations, with a sensitivity (3) superior to that of digital angiography. CEMRA, a non-invasive procedure, has high sensitivity (4) and specificity for the diagnosis of clinically relevant PAVFs. Therapeutic options include angiographic embolization with metal coils or balloon occlusion and surgical excision. Angiographic treatment has become the mainstay of therapy for most patients during the last decade. It is minimally invasive and can be easily repeated. Contrast-enhanced three-dimensional MRA provide the interventional radiologist with a pre-embolization road map from which information regarding the number and size of feeding and draining vessels can be obtained accurately and noninvasively.

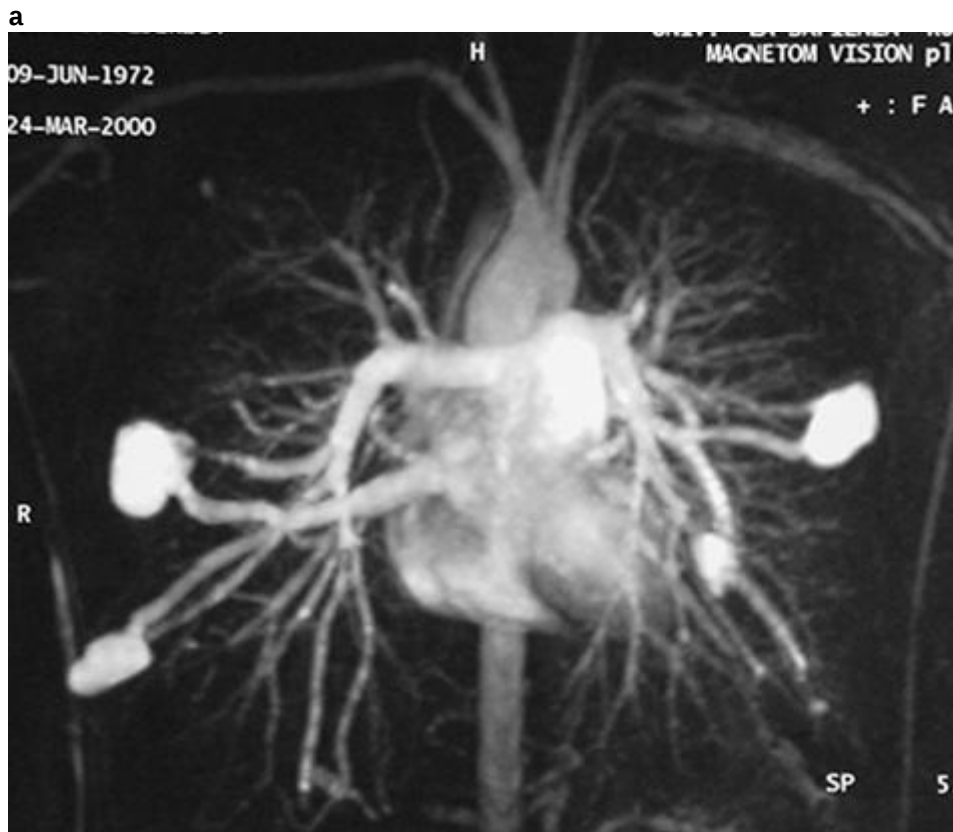
Differential Diagnosis List: Rendu-Osler-Weber disease

Final Diagnosis: Rendu-Osler-Weber disease

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Figure 1



Description: MRAngiography using MIP reconstruction shows the presence of multiple, bilateral arteriovenous malformations of pulmonary vessels **Origin:**