CARDIOVASCULAR FLASHLIGHT

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Choriocarcinoma mimicking chronic thromboembolic pulmonary hypertension

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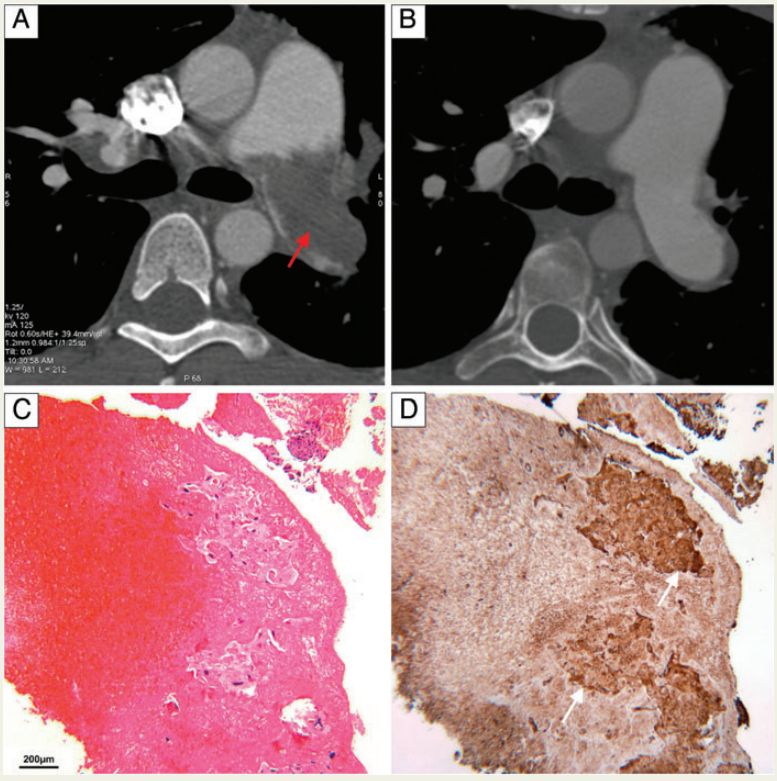
Choriocarcinoma of the pulmonary arteries is rare yet curable, and may mimic chronic thromboembolic pulmonary hypertension (CTEPH). It is unclear whether the condition is genuinely embolic. In our case, the diagnosis was made by pulmonary endarterectomy (PEA), procedure of choice for CTEPH.

A 31-year-old woman experienced an episode of stabbing chest pain at rest, followed by cough over a few days in August 2013. At the time she was diagnosed as low-risk (by PESI score) pulmonary embolism (PE) using contrast-enhanced CT scan and treated with rivaroxaban. In February 2012, the patient had given spontaneous preterm birth to her second child. Due to persistent uterine bleeding 4 weeks after delivery a variety of tests had been performed, including serum-β human chorionic gonadotropin (β-HCG) measurement. It was found to be elevated at 2690 mU/mL and ascribed to recent pregnancy. In March 2014 patient underwent elective hysterectomy, it revealed an enlarged but histologically inconspicuous uterus.



In January 2015, the patient experienced recurrent PE, this time it was diagnosed as intermediate high-risk PE. As the patient had previously documented PE in addition to typical symptoms and findings: severe dyspnoea, hypoxaemia, enlarged right ventricle, and estimated systolic pulmonary artery pressure of 75 mmHg, there was a strong suspicion of CTEPH. Invasive mean pulmonary artery pressure of 30 mmHg confirmed the diagnosis of CTEPH. In March 2015, patient underwent bilateral PEA (*Panels A* and *B*) with histological confirmation of choriocarcinoma (*Panels C* and *D*). β- Human chorionic gonadotropin serum level at the time of PEA was 29 4742.0 mU/mL. After procedure, patient was initiated on chemotherapy and recovered fully after its completion.

Panels A and *B*: Contrast-enhanced CT scan before and $3\frac{1}{2}$ months after PEA. In *Panel A*, the pulmonary artery obstruction is overriding the bifurcation (red arrow), irregularly shaped, and protruding into the lumen, which is typical for pulmonary artery malignancy (myxoma, angiosarcoma, and choriocarcinoma), and was the only sign alarming the CTEPH surgeon who sent out a frozen section during PEA. Pulmonary artery patency was restored by PEA (*Panel B*). *Panels C* and *D*: Histological images of the PEA specimen. In *Panel C*, a haematoxylin-eosin stain of a 3 µm paraffin section of the PEA specimen is shown, in *Panel D*, the parallel stain with an antibody-directed against β-HCG. Giant cells (white arrows) are typical of choriocarcinoma and are staining dark brown.