

successfully, it is an efficacious, easy-to-manage and low-risk method for treating PAVF.

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TRANSCATHETER OCCLUSION OF A GIANT PULMONARY ARTERIOVENOUS FISTULA IN A FOUR YEAR OLD CHILD

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Case Presentation A 4-year-old child presented with lip cyanosis and massive hemoptysis (about 250 ml) was admitted. On admission, his reading was as follows: temperature, 37.3°C, respiratory rate, 26/min, heart rate, 98/min, blood pressure, 85/46 mm Hg, SpO₂, 81%. Routine blood tests were normal except for haemoglobin 176 g/l, white blood cell 12.67×10⁹/l with neutrophil 77.4%. Physical examination found lip cyanosis and moist rales throughout his right chest, the remained examination was unremarkable. After stopping bleeding and oxygen supplementation, the patient underwent computed tomography angiography (CTA) and identified enlarged right pulmonary artery trunk, right inferior pulmonary artery (1.4 cm) and right inferior pulmonary vein, there was an abnormal communication between right inferior pulmonary artery and right inferior pulmonary vein which formed a irregular soft tissue density mass (7.0×5.4×3.1 cm) and was enhanced after injection of contrast, suggesting PAVF. The patient received antibiotics and his condition became well. Then he underwent cardiac catheterisation examination. After right femoral vein puncture and placement of an introducer sheath, a pig-tail catheter was advanced to the level of the right pulmonary artery and angiography confirmed PAVF, an Amplatzer Plug was delivered to the feeding artery and occluded the fistula. Fifteen min later, an angiogram confirmed complete occlusion of the fistula. There were no obvious influence on pulmonary arterial pressure and no complications during the procedure. The patient's lip cyanosis disappeared, SpO₂ increased to 97% and maintained a good condition in the 4 months follow-up.

Discussion PAVF is infrequent and usually congenital. Dyspnea is the most common symptom and more than half of patients can develop serious complications as paradoxical embolisation and haemoptysis, which are even fatal. Echocardiography and CTA are helpful to make the diagnosis while cardiac catheterisation is the "gold standard" to diagnose PAVF. Tran catheter occlusion is a new choice for patients who can't bear surgery. Although the use of coils, silicone balloons are effective, they have certain limitations, for instance, the reopen rate is high and migration or paradoxical embolisation of coils may take place at unintended sites. The present patient chose Amplatzer Plug, a new cylindrical self-expanding device made of Nitinol wire mesh and indicated for arteriovenous embolisations. This plug enables more precise occlusion and positioning can be verified before release, it recommended that the plug size is 30% to 50% larger than the diameter of the vessel to be occluded. In conclusion, the child undertaken Tran catheter occlusion of a giant PAVF with Amplatzer Plug