Successful percutaneous closure of an aneurismal patent ductus arteriosus by aortic grafting and Amplatzer ASD closure device implantation.

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Closure of aneurismal patent ductus arteriosus (PDA) in the elderly is a high risk procedure due to the fragility of the aorta and the ductus.

We report the case of a 63 year old lady who is known to have chronic renal failure on hemodialysis, coronary artery disease and severe chronic obstructive pulmonary disease. She presented with refractory pulmonary edema and chest pain complicated by acute cardio-pulmonary arrest that needed resuscitation and support ventilation.

Her coronary angiography showed no significant stenosis and her echocardiography revealed a mildly dilated left ventricle with a good ejection fraction, normal valvular function and no pericardial effusion. Her chest Angio-CT uncovered a large PDA (35x30mm) with peri-ductal hematoma suggesting acute fissuration.

Due to her frail physical condition, a percutaneous intervention was scheduled to close the PDA. An aortic stent graft was first placed by trans-femoral arterial approach in order to cover the aortic orifice. An Amplatzer ASD closure device was then successfully implanted on the pulmonary artery orifice of the ductus (figure: CT-Scan immediately after the intervention). The post-procedural evolution was uneventful and free of complications. A control CT-Scan that was done 6 months after the intervention showed stability of the grafts and complete isolation and involution of the PDA.

To our knowledge, this is the first time such a double grafting approach is successfully used to close percutaneously an aneurismal PDA, underlying both the feasibility and the safety of the technique.