

# Penetrating Atherosclerotic Ulcer Possibly Originating from a Saccular Ductus Arteriosus Aneurysm: a Case Report

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## **Abstract**

Ductus arteriosus aneurysm is a rare condition in adults and is sometime associated with lethal complications, including penetrating atherosclerotic ulcers. Here, we report the case of a 67-year-old patient who presented with persistent dry cough and hoarseness. Computed tomography revealed a saccular aneurysm 50 mm in diameter in the lesser curvature of the distal aortic arch opposite to the origin of the subclavian artery. The patient had no risk factors for atherosclerosis, such as hypertension, dyslipidemia, diabetes mellitus, or obesity. Imaging studies indicated no advanced atherosclerotic lesions in other arteries, including the abdominal aorta, or the coronary and cerebral arteries. Treatment with total arch replacement was successful. A follow-up of 17 months after the operation indicated a complete resolution of all symptoms, except for paramedian left vocal cord paralysis. Pathological examination showed the presence of ulceration in an atheromatous plaque penetrating the intima and media, and the formation of an underlying saccular aneurysm with rupture. This case suggests that penetrating atherosclerotic ulcers may form in ductus arteriosus aneurysms in adults regardless of major risk factors for atherosclerosis.

**Key words:** Ductus arteriosus aneurysm, penetrating atherosclerotic ulcer, pseudoaneurysm