RIGHT SUBCLAVIAN ARTERY ANEURYSM WITH COARCTATION OF AORTA PRESNTING WITH HORNER'S SYNDROME IN AN ADULT

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ABSTRACT

Coarctation of aorta is congenital narrowing of the upper descending aorta adjacent to the site of attachment of the ductusarteriosus. The combination of subclavian artery (SCA) aneurysm with coarctation of the aorta is a rare condition. This causes hypertension in arms, while the blood pressure in legs is lower. We report a case of 42 years old male with coarctation of the aorta and right subclavian artery aneurysm who presented with Horner's syndrome due to pressure effects of right subclaviananeurysm.

INTRODUCTION

As the aorta proximal to coarctation is anomalous, including its main branches, aneurysm formation can occur in both subclavic arteries due to prolonged hypertension[1] Aorta coarctation is a narrowing of the aorta, which most often occurs just beyond the left subclavian artery[2]. When diagnosed, the coarctation segment and aneurysm can be surgically treated because of the risk of ischemic complications secondary to thromboembolic phenomena caused by aneurysm leading to embolization in the upper extremity and vertebral vessels[3].

CASE REPORT

A 42 years old male patient who had type II diabetes mellitus, hypertension and right sided Horner's syndrome with absent femoral pulses presented to us for evaluation. On chest x-ray a mediastinal shadow was visible on the right side of the cardiac shadow. CT angiography of the chest showed coarctation of aorta at the level of ductusarteriosus with 6 x 6 cm aneurysm of second part of the right subclavian artery. His coronary angiography was unremarkable and aorto gram showed no communication across the coarctation segment.

He underwent patch-plasty with a Dacron patch for coarctationthrough posterolateral left thoracotomy in 4th intercostal space in first stage. Three weeks later, in second stage, through a trap door incision right subclavian artery was exposed. With proximal and distal control the aneurysm was opened and the ostium of ver-

Figure-1(a): Amediastinal shadow was visible on the right side in chest x-ray.

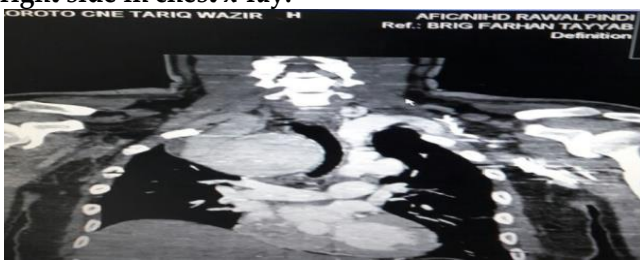

Figure-1(b): Coarctation of aorta at the level of ductusarteriosus.

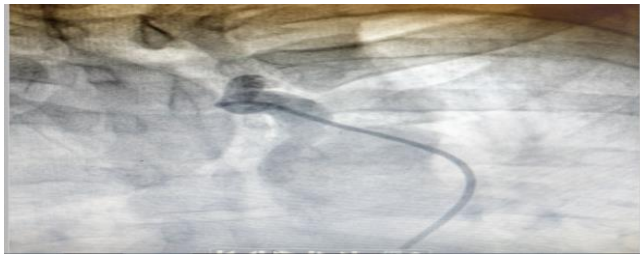

Figure-1(c): The aneurysm was replaced with a 6 mm Teflon graft.

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tebral artery was stitched from within with a 2/0 silk suture. The aneurysm was replaced with a 6 mm Teflon graft.

DISCUSSION

Aortic coarctation is a congenital heart disease that occurs in about 7% of patients. It is associated with various abnormalities that affect the proximal and distal aorta adjacent to the coarctation; the ascending and transverse aorta; the radial, brachial, and carotid arteries; and the retinal vascular bed[3-4]. These anomalies may include collateral arteries, vascular rings, aortic bicuspid valve, dissecting aneurysms, cerebral aneurysms and decreasing to the left interpa-pillary ventricular distance[5].

It has only been shown in recent years that the wall of the proximal aorta to coarctation is abnormal and that the abnormalities extend to all the major arteries supplied by the proximal aorta to the coarctation. Because of the shear effects of hypertension, aneurysm can form in left or right subclavian arteries[6]. SCA Aneurysms are rare[7], And only 1 percent of all peripheral arteries are subclavian and innominate[8]. Various studies reported that only 2 out of 1488 cases of atherosclerotic aneurysm had SCAA, with an incidence of about 0.13%. The largest aneurysm thus far reported measured 12 cm[9]. A literature review conducted by Hobson *et al* identified 195 cases of aneurysms in this topography, accounting for 1% of all peripheral aneurysms, 88% of which were in the subclavian artery. Coarctation of aorta in adults can be treated with stenting and subclavian aneurysm can be excluded with covered stents endo-luminally. Surgical correction of aortic coarctation and resection and replacement of subclavian aneurysm can be exercised easily[10].

CONFLICT OF INTEREST

This study has no conflict of interest to declare by any author.

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