Spontaneous Rupture of Aorta

Rajesh Battula, Pradeep Vaideeswar, Vikas Dubey
Dept of Pathology(Cardiovascular and thoracic division), Seth GS Medical College and KEM hospital, Mumbai

Introduction

• Spontaneous rupture of aorta is a rare event, potentially lethal event.
• Occurs in the absence of trauma, dissection, aneurysmal or inflammatory disease of aorta.
• We present one such case in an elderly hypertensive woman.

Clinical History

• 68 year female
• Chronic kidney disease and chronic hypertensive
• Admitted with sudden-onset shortness of breath followed by altered sensorium.
• Prior admission to private health-care facility for loose motions, vomiting and oliguria.
• She was given fluid replacement therapy.
• Died within two hours of admission.

Autopsy Findings

• On complete autopsy:

A. In situ examination of thoracic cavity: Incision of pericardium revealed presence of hemopericardium (400g of blood clots)

B. Moderate cardiomegaly (wt. 410g), moderate left ventricular hypertrophy. Striking feature is hemorrhagic adventitia of dilated ascending aorta with a circumferential depression (arrow)

C. Complete transection of the entire aortic wall (arrow) is seen 4.5 cm above the sinotubular junction. Note the presence of extensive adventitial hemorrhage; D&E. Complete transection of aorta (*) and presence of false lumen (FL) with extensive adventitial hemorrhage

Cause of Death

• Cardiac Tamponade due to hemopericardium following aortic rupture.

Discussion

• Risk factor for spontaneous aortic rupture is hypertension with or without superadded complicated atherosclerosis.
• Can affect any segment of the aorta.
• About 40 cases have been reported of which only 25% cases were seen in the ascending aorta.
• All patients had been hypertensive.
• Pathogenesis is explained on penetration of atherosclerotic ulcer through the media or on medial changes due to chronic hypertension.
• In our case there was no significant atherosclerosis and its complication.

Conclusion

• Spontaneous aortic rupture should be kept in mind as a rare cause of acute aortic syndromes in elderly hypertensive patients.

References