

Atherosclerosis Presenting as Penetrating Aortic Ulcer and Focal Dissection

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Abstract

The penetrating aortic ulcer refers to an atherosclerotic plaque which damages the internal lamina and media of aortic wall leading to hemorrhage and formation of intramural thrombus. Intermedia dissection and localized hematoma may be found in advanced atherosclerosis which may rupture the aortic adventitia leading to pseudoaneurysm formation.

Keywords: *Atherosclerosis; Aortic Ulcer; Focal Dissection*

Case Report

A 65 year old asymptomatic female was suspected to have a distal ascending aortic aneurysm and a moderate Aortic Regurgitation with some aortic sclerosis on routine health check-up. She then got an echocardiogram done elsewhere where she was suspected to have a dissection of aorta. She presented to us with a diagnostic dilemma. We did a transoesophageal echocardiography which showed a moderate Aortic regurgitation with localized dilatation of ascending aorta in lateral aspect with large thrombus (Figure A) filling the lumen. Aneurysmal dilatation was limited to ascending aorta just near brachiocephalic trunk. However, rest of arch and descending aorta was of normal diameter. There was no flap seen in ascending or descending aorta. CT Aortogram was done for further confirmation of diagnosis which revealed diffuse atherosclerosis with a penetrating aortic ulcer in distal ascending aorta. The aneurysmal dilatation was filled with thrombus (Figure B). The patient was subjected to a coronary angiogram which revealed a triple vessel disease. Surgical correction of aneurysm was done by reduction aortoplasty along with thrombus removal, aortic valve replacement and Coronary artery bypass grafting [1-3].

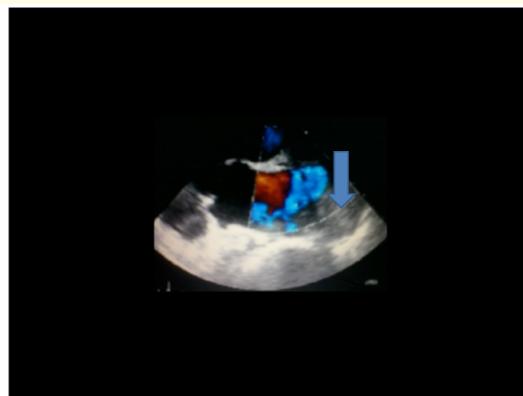


Figure A: *Transesophageal echocardiography showing distal ascending aorta thrombus (arrow).*

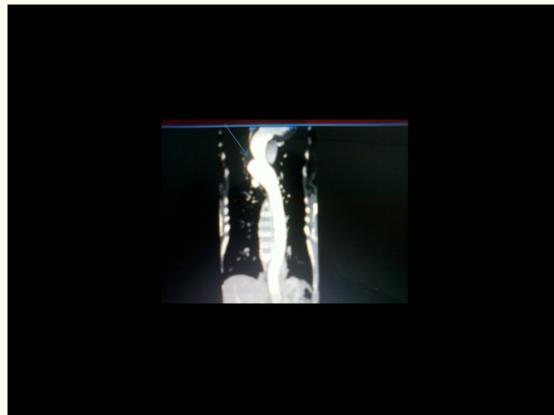


Figure B: CT Aortogram showing distal ascending aorta thrombus with a penetrating aortic ulcer (arrow).

Conclusion

Acute aortic syndrome is broad term given to a variety of aortic emergencies such as dissection, intramural thrombus, pseudoaneurysm formation, penetrating aortic ulcer and transection of Aorta secondary due to trauma. The three layers of aortic wall from inside out are the intima, media and adventitia. Damage to aortic wall layers by various reasons and mechanisms lead to acute aortic syndrome.

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