Aortic tear presenting as acute myocardial infarction

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INTRODUCTION

This case report describes a rare form of an ascending aortic tear presenting as an acute coronary syndrome.

CASE DESCRIPTION

A 49-year-old male patient with progressive dyspnea, hypertension, hyperlipidemia, and obesity presented with acute onset of severe chest pain. An acute non-ST elevation myocardial infarction was diagnosed based on increased blood levels of troponin. Cardiac catheterization defined normal coronary arteries, but a ventriculogram revealed a 5.5 cm aortic root aneurysm. TTE, TEE and MRI imaging confirmed the presence of an aortic root aneurysm with severe aortic insufficiency without dissection. His chest pain abated with medical management. A repeat MRI four days later showed no evidence of aortic dissection. During a scheduled operation for aortic valve and root replacement, the surgeon noticed a 2 cm intimal tear which was avulsed from the aortic valve and 400 cc of pericardial blood was drained.

DISCUSSION

Acute anterior aortic dissection commonly presents as acute anterior chest pain which does not radiate to shoulders or jaw as in our case.1,2 Acute aortic dissection involving coronary arteries may present as an acute MI and extension into pericardium may result in pericardial effusion.1 Acute aortic regurgitation is another form of presentation of ascending aortic dissection.1 Ascending aortic dissection rarely presents as focal neurological deficits.2 While the presence of the intimal flap is the most common feature seen in imaging modalities, aortic dissection may present as an intramural hematoma without intimal flap.1 An intimal tear without progression into medial layers of the aorta is a rare variant form of presentation of acute aortic dissection and is unlikely to be detected by standard imaging techniques like TEE, MRI, CT scan or Aortography.3

CONCLUSION

Our patient had variant form of an intimal aortic tear without medial layer progression, that was missed by standard imaging modalities. If in the presence of strong family history of aortic dissection, a patient presents with acute chest pain, then aortic dissection should be considered as a differential diagnosis.

REFERENCES

2. JAMA 2002;287:2262-72