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SPONTANEOUS ISOLATED COELIAC ARTERY DISSECTION, MIMICKING THORACIC AORTIC DISSECTION: A CASE REPORT


Key words: Aneurysm, angiography, anticoagulant therapeutic use, celiac artery injuries pathology radiography, rupture, stents, vascular surgical procedure

ABSTRACT

Aortic dissection is a well-known differential diagnosis for thoracic back pain radiating to the chest. Dissection of a visceral artery is a rare condition which normally presents with abdominal pain.

We describe the case of a 53-year-old hypertensive man who presented with sudden onset of sharp inter-scapular back and central chest pain without any abdominal discomfort. This pain subsided after a short period but did not completely resolve. Computerized tomography (CT) angiogram with working diagnosis of thoracic artery dissection was performed. This revealed isolated celiac artery dissection. Patient had persistent hypertension and mild thoracic back pain. He subsequently was admitted to the hospital for blood pressure management and monitoring.

This case, unlike other cases in medical literatures, suggests that coeliac artery dissection can present with thoracic back/chest pain and can be managed conservatively.

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THE CLINICAL CASE

In September 2015, a 53 year old non-smoker male of South East Asian heritage was referred to the emergency department (ED) of our hospital by his general practitioner (GP), eleven hours after rapid onset of severe sharp inter-scapular back pain, with associated central chest pain and no abdominal discomfort. This pain had woken him up from sleep. At the time of presentation he was complaining of mild thoracic back pain, with no chest or abdominal pain. His only past medical history was essential hypertension (HTN) for 20 years. He had ceased his medication himself without medical consultation when he migrated to Australia several months ago. History and physical examination revealed mild lower thoracic-upper back discomfort rated by patient as one out of 10 with no radiation, his blood pressure (BP) was 193/123 mmHg in the right arm and 184/124 mmHg in the left arm; Laboratory tests, including a complete blood count and basic metabolic profile, including liver function tests (LFTs) and lipase, as well as his chest X ray (CXR) were normal. His electrocardiogram (ECG) was normal; of note there were no changes to suggest left ventricular hypertrophy (LVH).

A computerized tomography (CT) angiogram was performed with a working diagnosis of thoracic aortic dissection. The aorta was found to be normal but an intimal flap was visualized in the proximal coeliac artery indicative of spontaneous coeliac artery dissection. There was contrast distal to the flap, demonstrating patentcy of the vessel (Figures 1, 2A, 2B and 3).

His ED management consisted of 300 mg of aspirin and intravenous glyceryltrinitrate (GTN) infusion, with a target strict systolic blood pressure (SBP) < 130 mmHg. He was admitted to the hospital high dependency unit (HDU) under care of vascular surgical unit, who continued conservative care. His SBP was controlled with the GTN infusion, and anti-coagulation with daily dose of 40 mg subcutaneous enoxaparin, in conjunction with anti-platelet therapy with 100 mg daily dose of aspirin, were started. He had also long-term anti hypertensive medication started. This included metoprolol 12.5 mg BID, amlodipine 5 mg daily (which were later increased to 25 mg and 10 mg respectively) and on day 2, 10 mg daily dose of perindopril was added.
All investigations for secondary hypertension were negative and the intravenous GTN infusion weaned and ceased after four days. He was discharged home on day five, on metoprolol 25 mg BID, and daily doses of amlodipine 10 mg, perindopril 10 mg, aspirin 100 mg and atorvastatin 40 mg. He was reviewed by cardiology team with a normal trans thoracic echocardiogram two months after discharge and remained asymptomatic with controlled blood pressure. His ongoing care was done with his GP and he has remained asymptomatic. A follow up phone call seven months after discharge reports him in a good condition.

DISCUSSION

Isolated coeliac artery dissection often presents with upper abdominal pain or lower back pain and can sometimes be asymptomatic [1]. This patient’s symptoms were unusual because he lacked abdominal discomfort and instead had chest and interscapular pain. Our review of the PubMed database did not reveal any other cases with this distribution of pain. One case report mentioned a patient who presented with epigastric and right upper quadrant pain with radiation to her left breast. Our patient still stands out due to his lack of abdominal pain [2].

The average age at diagnosis is approximately 55 years and most patients are male [3;4]. Risk factors include hypertension, abdominal aortic aneurysms, trauma, connective tissue disorders, pregnancy and cystic medial necrosis [5]. Dissection may cause obstruction of the vessel lumen causing endorgan ischemia. However it is relatively less likely to be associated with end organ mal-perfusion than superior mesenteric artery (SMA) dissection due to rich collateral blood supply from the SMA [6]. Dissection can also result in formation of aneurysms of the celiac artery or its branches which when ruptured are fatal in almost 50% [6]. In some patients lipase may be elevated from pancreatic ischemia leading to a potential pitfall where clinicians are falsely reassured into a diagnosis of pancreatitis [2].

Management should involve prompt referral to a vascular surgical team for consideration of operative repair, endovascular stenting or conservative treatment. Conservative management consists of blood pressure control to prevent propagation, which may be combined with anti-coagulation or an anti-platelet to reduce thrombosis. The evidence currently suggests conservative management is safe initial option for stable patients without evidence of end-organ mal-perfusion, aneurysm or haemorrhage [3].

CONCLUSION

Although celiac artery dissection typically presents with abdominal and lower back pain this case demonstrates that it can also present with symptoms of chest pain and thoracic back pain. We recommend that it be considered as a rare but important differential in patients suspected to have aortic dissection.

REFERENCES