Ripping abdominal pain with a tortoise heart: descending aortic dissection presentation with backache and sinus bradycardia in the emergency department

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Background: Severe tearing-type chest pain radiating to the back is the typical presentation of aortic dissection, commonly manifesting with tachycardia and hypertension, especially Stanford type B aortic dissections. We present a case of sinus bradycardia in a type B aortic dissection patient with a severe, painful aortic dissection, not involving the coronary arteries initially. This is a case of paradoxical bradycardia with severe pain.

Case Presentation: A 17-year-old, previously unscreened Sri Lankan male presented with acute-onset abdominal pain radiating to the back with no hematuria, limb paralysis, fever or other urinary bowel symptoms. Clinical examination revealed no radio-radial or radio-femoral delay or blood pressure discrepancy. He had Marfanoid features and kyphoscoliosis, but the vital parameters were stable, other than severe bradycardia and sinus arrhythmia. The pain was not settling with intravenous morphine, requiring additional analgesia. Despite being in severe pain (worst-ever 10/10), the patient was in persistent bradycardia around 40 bpm. He has been taking alcohol and cannabis occasionally, but has not taken them recently. He was neither an athlete nor involved in physical exercises. Troponin I, serum amylase, and other biochemicals were negative. An extensive point-of-care ultrasound revealed aortic dissection with anintraluminal flap-like object in the lower thoracic region, with no evidence of pericardial effusion/ cardiac tamponade, regional wall motion abnormalities or pneumothorax. However, the patient succumbed to death, like 50% of the cases, but the postmortem confirmed the diagnosis of aortic dissection.

Conclusion: Bradycardia in a type B aortic dissection is an atypical presentation. Life-threatening aortic dissection should be suspected in the presence of risk factors for aortic dissection (e.g., Marfan's Syndrome), even if the clinical signs do not provide evidence of aortic dissection, especially if there is severe abdominal/ back pain. The paradoxical phenomenon of bradycardia in severe pain could mislead the diagnosis and result in devastating consequences.

Keywords: Bradycardia, aortic dissection, paradoxical bradycardia.