Introduction: Rupture of the vasa vasorum into the media of the aortic wall results in an aortic intramural hematoma. Intramural hematoma (IMH) weakens the aorta and may progress either to outward rupture of the aortic wall or to inward disruption of the intima, the latter leading to communicating aortic dissection. We report a case of a patient who had an IMH of the ascending aorta that developed into an descending aortic dissection.

Case Presentation: 51-year-old gentleman with no PMH presented to the ER with tearing pain in his bilateral shoulders radiating to the back. Was found by CT scan to have what looked like an intramural hematoma and an ascending dissection that extended all the way down to the renal arteries. He was emergently transferred to MGH and brought straight to the OR.

Operative Course: ASA monitors. Awake arterial line placed. Patient was intubated with Macintosh #3 laryngoscope, grade II view and size 8 ETT. Central Line and PA catheter placed. Anesthesia was maintained with Isoflurane 0.9 MAC.

An intraoperative TEE was performed. A dissection was found in the descending aorta with an intramural hematoma in the ascending aorta. The decision was made to replace the ascending aorta and hemic arch.

Discussion: Patients presenting with acute aortic syndromes usually have a clinical profile of aortic pain with a coexisting history of hypertension. However, the pathophysiology and appearance of these syndromes differ in many ways. The classic aortic dissection involves an intimomedial flap, which traverses the aortic lumen. Intramural hematoma and penetrating aortic ulcer are nonflap lesions, with intramural hematoma showing no intimal disruption and penetrating aortic ulcer showing an ulcer at the atherosclerotic plaque burrowing through the aortic intima and media. Radiologic evaluation plays a key role in assessing patients with acute disease of the aorta, and imaging techniques should aim both to diagnose the condition and to characterize the underlying pathology.

Reference