

## A CASE OF IATROGENIC AORTIC INTRAMURAL HEMATOMA

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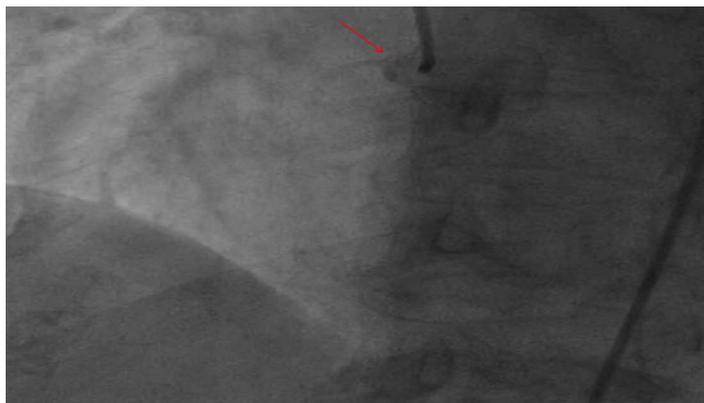
### Abstract

Iatrogenic aortic dissection during percutaneous coronary intervention is a rare but serious complication. Both conservative and surgical approaches have been proposed as management strategies. We describe a case of an 87-year-old female who presented with an acute coronary syndrome complicated by the development of an ascending aortic dissection during percutaneous intervention, and we provide a brief review of the literature.

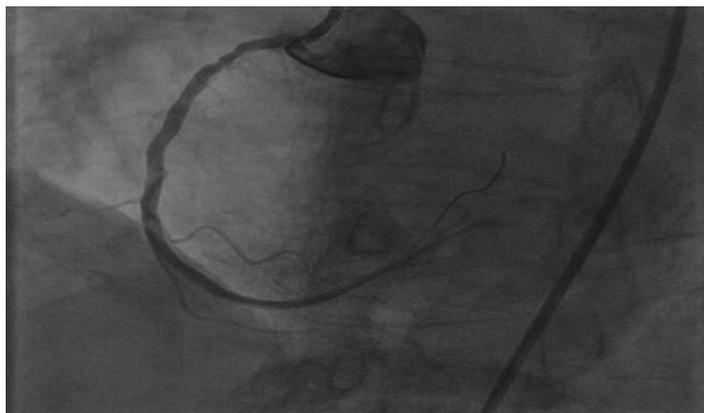
### Case Presentation

An 87-year-old female patient with a history of hypertension and hyperlipidemia presented to our hospital with acute chest pain. Electrocardiogram showed inferior ST-elevation. Emergent coronary angiogram showed a proximal right coronary artery (RCA) occlusion (Figure 1, online video 1). After successful wiring and angioplasty of the lesion, a stent was deployed to cover the proximal RCA (Figure 2, online video 2). Contrast injection after stent deployment resulted in acute dissection of the right coronary

cusps with extension into the proximal ascending aorta (Figure 3, online video 3). A coronary stent was implanted at the ostium to seal the entry site of the dissection. At the end of the procedure, the patient remained stable. Transesophageal echocardiogram showed an ascending aortic intramural hematoma (IMH) (Figure 4). Computed tomography (CT) showed a small aortic intimal tear (Figure 5, white arrow) with an associated IMH (Figure 5, red arrow). Repeat CT scan 4 days later showed no progression of the aortic IMH. The patient was asymptomatic at the 6-week follow-up, with



**Figure 1.** Coronary angiogram showing a proximal right coronary artery (RCA) occlusion. See online video 1.



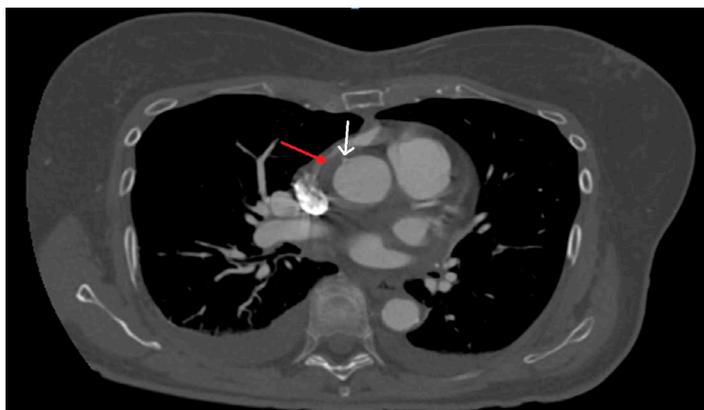
**Figure 2.** Percutaneous intervention with stent deployment in the proximal right coronary artery. See online video 2.



**Figure 3.** Contrast injection after stent deployment resulting in acute dissection of the right coronary cusps with extension into the proximal ascending aorta. See online video 3.



**Figure 4.** Transesophageal echocardiogram showing an ascending aortic intramural hematoma (red arrows).



**Figure 5.** Computed tomography (CT) scan showed a small aortic intimal tear (white arrow) with an associated intramural hematoma (red arrow).

a repeat CT scan showing improvement in the size of the hematoma and resolution of the intimal tear.

### Discussion

Iatrogenic coronary artery dissection extending into the coronary sinuses during percutaneous coronary intervention is found in 0.06% to 0.1% of cases.<sup>1,2</sup> Iatrogenic retrograde dissection into the ascending aorta during percutaneous coronary intervention is reported in 0.04% of interventional procedures and up to 0.008% of diagnostic coronary angiographies.<sup>1,2</sup> Although current literature relating to this complication suggests that surgical management may be indicated, a conservative approach has been adopted in several cases with excellent long-term results.<sup>3</sup> Coronary stent im-

plantation can be a therapeutic option since it seals the entry site of the dissection that originates from the coronary ostium.<sup>4</sup>

### Conclusion

We describe a case of percutaneous coronary intervention complicated by the development of an iatrogenic aortic dissection. A conservative strategy with stent implantation has been proposed as a viable alternative to surgical intervention.

**Conflict of Interest Disclosure:** The authors have completed and submitted the *Methodist DeBakey Cardiovascular Journal* Conflict of Interest Statement and none were reported.

**Keywords:** iatrogenic aortic dissection, percutaneous coronary intervention

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