Dissection of the Aortic Sinus of Valsalva During Coronary Angiography in a Patient with Spontaneous Coronary Artery Dissection

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Figure 1: RAO view of RCA revealing a spiral dissection located in the distal RCA.



Figure 2: Dissection of the aortic sinus of valsalva.

A 61-year-old female patient was hospitalized with the diagnosis of subacute inferior myocardial infarction (MI). Echocardiogram revealed inferior akinesia with an ejection fraction of 56%. On the 5th day of her hospitalization coronary angiogram was performed. Left coronary injection revealed a disease free left coronary artery with a non-dominant circumflex artery. Right coronary artery (RCA) was observed to be a dominant artery with a spiral dissection located in the distal portion proximal to the bifurcation of posterior descending and posterolateral artery (Fig.1). However on the third and fourth injections the dissection was observed to extend retrogradely towards the ostium and a dense and clearly limited contrast staining in the sinus of Valsalva was observed due to retrograde extension of the dissection (Fig. 2). Although the distal flow of RCA was preserved, it was observed to be slower. The patient began to experience a severe chest pain with ST elevation in the inferior leads. She was then immediately transferred to the operation room for an urgent operation to seal the dissection and prevent its extension into the ascending aorta.

The operating surgeon reported a small area of hemorrhage in the adjacent aortic wall coinciding with the right sinus of Valsalva. Primary repair of the dissection was performed. The patient did well after the operation and discharged on the 5th day. She is asymptomatic and doing well since then.

We present a case with spontaneous dissection that might have an inborn error of metabolism and collagen synthesis, which was complicated with an aortic dissection.

Patients with SCAD might be more prone to dissection during coronary angiography. Avoiding forceful and excessive injections may prevent this complication. To the best of our knowledge this is the first report of SCAD associated with aortic sinus of Valsalva dissection during the angiography.