Iatrogenic Aortic Valve Hematoma: A Life-Threatening Complication of Coronary Angiography
Mohamad Ali Ostovan and Amir Aslani
Circulation 2007;115:e443-e445
DOI: 10.1161/CIRCULATIONAHA.106.678748
Circulation is published by the American Heart Association. 7272 Greenville Avenue, Dallas, TX 75231
Copyright © 2007 American Heart Association. All rights reserved. Print ISSN: 0009-7322. Online ISSN: 1524-4539

The online version of this article, along with updated information and services, is located on the World Wide Web at:
http://circ.ahajournals.org/cgi/content/full/115/18/e443
A 44-year-old woman was referred for coronary angiography because of a history of recurrent chest pain beginning 6 months before admission. The patient underwent selective coronary angiography, which revealed no evidence of coronary artery disease. The right coronary artery was difficult to catheterize with the 6 French right Judkins catheter because of a tendency of the catheter tip to jump from the sinus of Valsalva. Six hours later, the patient developed chest pain. Further review of the coronary angiography again confirmed the presence of normal coronaries. The patient’s chest pain worsened, and she suddenly developed ventricular fibrillation. Cardiopulmonary resuscitation was immediately started, and, fortunately, the patient’s hemodynamic became stabilized. A new ECG was taken and showed new changes in favor of posterior, inferior, and right ventricular myocardial infarction. The patient underwent transthoracic echocardiography in which a round density (10×10 mm) on the right coronary cusp of the aortic valve was seen; its presence was confirmed in several views (Figure 1 and Movies I and II). Transesophageal echocardiography was done; this also confirmed the presence of a round density (10×10 mm) on the right coronary cusp of the aortic valve (Figure 2). Considering her previous, normal echocardiogram (Figure 3), which had been performed 2 weeks earlier, there was no definite interpretation for this finding. It was hypothesized that the mentioned density on the right coronary cusp of the aortic valve occluded the right coronary ostium and caused acute myocardial infarction. Therefore, urgent cardiac surgery consultation was done, and the patient underwent operation. Right coronary cusp hematoma occluding the right coronary ostium was the only intraoperative finding, and aortic valve replacement was performed. Pathological examination of the aortic valve confirmed the presence of right coronary cusp hematoma (Figure 4). The risk of acute complications, including death, myocardial infarction, and cerebral embolism, limits the applicability of coronary angiography as a “gold standard” approach for diagnosis of coronary artery disease. The present study describes a case of aortic leaflet hematoma as a complication of selective coronary angiography that might be fatal because it can occlude the ostium of the coronary arteries. To the best of our knowledge, there is no published report regarding aortic valve hematoma as a consequence of coronary angiography.

Disclosures

None.

References

Figure 1. Transthoracic echocardiography of a patient who developed cardiac arrest after selective coronary angiography. A round density is seen on the right coronary cusp and seems to occlude the right coronary ostium (white arrow).

Figure 2. Transesophageal echocardiography of a patient who developed cardiac arrest after selective coronary angiography. A round density is seen on the right coronary cusp and seems to occlude the right coronary ostium (white arrow).
Figure 3. Transthoracic echocardiography of a patient who developed cardiac arrest after selective coronary angiography. This echocardiography, which was done 2 weeks before the time of coronary angiography, is normal.

Figure 4. Microscopic study of the aortic valve, showing a well-defined hematoma attached to the inner layer of the aortic leaflet. The right panel (×250) is the magnified view of the left panel (hematoxylin and eosin staining).