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Complex Clinical Cases

AORTIC DISSECTION WITH A BICUSPID AORTIC VALVE RESULTING IN ST-ELEVATION MYOCARDIAL INFARCTION

Poster Contributions
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Background: One to 3.6% of ascending aortic dissection (AAD) present with concomitant myocardial infarction. Stanford type A classification has a lethality rate of 1 to 2% per hour in untreated patients.

Case: 47-year-old male, hypertensive with chest pain and acute ST elevation myocardial infarction (STEMI). After thrombolysis, he developed acute pulmonary edema requiring endotracheal intubation. Catheterization found no coronary obstruction but suggested an intimal flap. Focal dissection in the aortic root near the left coronary ostium was confirmed, in addition to a bicuspid aortic valve. Ascending aorta measured 45 mm at its largest diameter. Echocardiogram showed moderate to severe left ventricle (LV) systolic dysfunction secondary to segmental abnormalities.

Decision-making: ADD is a surgical emergency but decision to postpone surgery was necessary due to severe hemodynamic instability and subsequent multiple infections. David procedure (valve sparing aortic root replacement) was performed 3 months after admission. Three years later, follow-up shows good aortic valve function, no further dissection or dilatation of the aorta, but persistent LV systolic dysfunction.

Conclusion: Both STEMI and AAD are cardiac emergencies with high mortality if not treated promptly. The association of these two emergencies is challenging and thrombolysis in contraindicated in the suspicion of AAD. This patient underwent thrombolysis and had surgery for AAD postponed, but still with good outcome.