

Cardiogenic shock in patients with severe aortic stenosis: balloon first then ask questions?

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KEYWORDS: aortic stenosis, balloon aortic valvuloplasty, embolization, cardiogenic shock.

CITATION: *Cardiol Croat.* 2023;18(3-4):73. | <https://doi.org/10.15836/ccar2023.73>

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Introduction: Balloon aortic valvuloplasty (BAV) has seen re-emergence in the last few years as bail-out therapy in critical care patients presenting with cardiogenic shock (CS) and severe aortic stenosis (AS), who are temporarily unable to tolerate transcatheter aortic valve replacement (TAVR). Recent technical improvements, such as smaller sheath sizes and newer balloon formats, significantly reduced procedural complications and now BAV has been associated with similar rates of in-hospital complications compared with TAVR.^{1,2}

Case report: We present a case of 79-years-old male patient with severe AS who presented to emergency room with dyspnea and chest pain after syncope in profound CS with acute renal failure, complete heart block and diffuse ischemic electrocardiographic changes. Patient history revealed that he had paroxysmal atrial fibrillation and no significant obstructive coronary artery disease. Due to failure of medical treatment with high doses of inotropes and after echocardiographic assessment we decided to preform percutaneous balloon aortic valvuloplasty first. Postprocedural aortography demonstrated embolic occlusion of ostial right coronary artery (RCA) which was successfully treated with plain old balloon angioplasty and temporary pacemaker lead was inserted. Immediately after procedure successful weaning of inotropic support was possible and patient was discharged from hospital after seven days with plan to preform transcatheter aortic valve replacement.

Discussion: We report a case of RCA occlusion following BAV in a patient with no history of significant coronary artery disease. In the absence of significant coronary lesions, RCA occlusion was presumably caused by debris embolization from the severely degenerated aortic valve. Although patient had a history of paroxysmal atrial fibrillation, which also could, rarely, cause an embolization of coronary artery, in this setting more likely was the embolization caused by debris.

Conclusion: Although acute coronary occlusion is a known, albeit rare, complication of BAV, this is to our knowledge the first case of embolization of right coronary artery following BAV to be reported in recent literature.

RECEIVED:
February 18, 2023

ACCEPTED:
February 22, 2023



LITERATURE

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