Is antibiotic profilaxis really not needed in mitral valve prolapse?

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Patient Presentation

A 54 years old woman with dyslipidemia was admitted to the hospital due to the onset of persistent fever. She had no significant comorbidities and she had a known mitral valve prolapse, which was in clinical and echocardiographic follow-up since more than 15 years before.

Two months before the hospitalization she underwent dental hygiene procedure without taking any antibiotic before. The procedure included scaling and polishing of the teeth, and she referred just a mild bleeding. After few days she reported the onset of fever and therefore she started to take amoxicillin/clavulanic acid but without any significant improvement of symptoms.

Initial work up

At the blood chemistry she had a mild leucocytosis with neutrophilia and a rise in inflammatory indices. The Chest x-ray was normal. A systolic murmur was evident at the physical examination. Therefore, Transthoracic Echocardiogram was performed, followed by Transesophageal Echocardiogram (see Figure). At the Echo there was a significant endocarditic involvement of the mitral valve with multiple vegetations, two on the posterior leaflet (scallop P1 and P3) and one on the anterior one (scallop A3); moreover, there was a flail of the posterior leaflet (scallop P1) with subsequent moderate to severe eccentric valve regurgitation.

Diagnosis and management

Diagnosis of Endocarditis was made and, thus, antibiotic therapy was started with gentamicin and daptomycin, then switched to ampicillin and ceftriaxone after the isolation at the blood culture of Enterococcus Faecalis sensitive to them. Cerebral CT was performed with no evidence of embolization. Finally, owing to the significant endocarditis of the mitral valve with associate moderate to severe regurgitation, the patient underwent surgical intervention with mitral valve replacement with bioprosthesis.

Follow-up

The post-operative period was regular with no significant complications. She had no more fever and the antibiotics were stopped after six weeks.

Conclusion: We reported the case of a severe endocarditic involvement of the mitral valve in a patient with known valvular prolapse, who did not take any antibiotic before a minor dental procedure.

2015 ESC guidelines on Endocarditis recommend to not perform antibiotic prophylaxis in patient with no valvular prosthesis but with other form of valvular disease, including mitral valve prolapse (Class III, level of evidence C). Most of the time, patients with other form of valvular disease (e.g. mitral valve prolapse, bicuspid aortic valve, calcific aortic stenosis) do not experience endocarditis, neither after dental procedures. However, this case shows that sometimes it can happen due to the abnormal conformation of the native valve and, hence, it makes us wonder whether the antibiotic therapy should be indicated before dental procedures in those kind of patients.

Abstract P1304 Figure.