The outcome of a double valve infective endocarditis - cerebral embolization and cardiogenic shock

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Topic(s):
Acute Heart Failure: Treatment, Other

Introduction:
The presence of bicuspid aortic valve is usually connected with valve stenosis, regurgitation and an increased risk of infective endocarditis (IE) occurrence. The involvement of both aortic and mitral valves in the infectious process presents a surgical challenge and the outcome is worsened in patients with prosthetic valve endocarditis. We present the case of a patient with double valve infective endocarditis discovered due to the manifestation of the cerebral septic dissemination.

Case presentation:
We report the case of a 33-year-old male, known with mechanic valve replacement for bicuspid aortic valve 10 months ago, who is admitted in our department for fever, dysarthria with sudden onset and alteration of the general state. Physical examination included increased body temperature (38 °C), increased heart rate (95/min), with normal blood pressure. The neurological examination reflected no motor deficiency. 12-leads ECG showed sinus rhythm. The biological findings revealed the presence of an important inflammatory syndrome with increased leukocytes (21.640/mm3), neutrophilia, raised C reactive protein (19.471 mg/dl), normal renal function and INR. We checked for the agent responsible for the IE and the blood cultures reflected the presence of the Staphylococcus epidermidis. Transthoracic echocardiography (TTE) was the next demanded investigation and described a dysfunctional mechanical aortic prosthesis with severe aortic regurgitation, vegetation on the anterior mitral valve leaflet and aortic ring abscess. The evolution was not favorable despite the correct administration of the antibiotics with persistent inflammatory response and fever. The cerebral MRI confirmed the areas of acute cerebral infarction due to the septic embolization. Before transferring to the cardiovascular surgical center the patient developed cardiogenic shock with low blood pressure (90/70 mmHg), decreased blood oxygen concentration (oxygen saturation of 89% in the room air) and oliguria. After mechanical ventilation and two drugs for increasing blood pressure the status was still critical. He was transferred to the surgical center but the procedure was not successful since the surgical risk was very increased and sudden cardiac arrest generated by asystole did not respond to the medical maneuvers and the fatal outcome was inevitable despite all the desperate methods.

In conclusion we exposed a complex case of IE involving two valves and a ring abscess which assumed an increased surgical risk and despite all the actions there was a fatal outcome. The important message is that every young patient needs careful follow-up because some unwanted scenarios can be avoided.
Abstract:

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Funding Acknowledgements:

None to declare

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