Staphylococcus lugdunensis septicaemia – endocarditis for sure?

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Introduction: Staphylococcus lugdunensis is a species of coagulase-negative staphylococci (CNS) that causes a variety of infectious diseases, including infective endocarditis (IE), usually in an aggressive form with valve destruction and abscess formation, requiring surgery with a high mortality rate[1].

Case report: 23-year-old female, with no risk factors, presented in December 2020, with fever up to 40°C, vomiting and weakness lasting for ten days. Initial laboratory showed leukopenia with elevated C-reactive protein and procalcytonine. The patient was admitted to hospital and without obvious source of infection, treatment with broad spectrum antibiotics (co-amoxiclav and azithromycin) was started. Seven days later there was no clinical improvement. Transthoracic echocardiography (TTE) showed normal morphology of heart valves. As blood cultures were positive on S. lugdunensis, vancomycin was introduced in therapy and more frequent TTE examinations were taken. Three weeks after symptom onset and two weeks after blood cultures were positive, a TTE revealed vegetation, in the atrial aspect of the P3 segment of posterior mitral cusp with eccentric mitral regurgitation and transesophageal echocardiography (TEE) confirmed mitral valve endocarditis. Linezolid was introduced to therapy and patient was referred to cardiac surgery due to persistent septicemia. Intraoperatively, vegetations found on P3 segment of mitral valve with perforation, were excised and A3-P3 segment was reconstructed with pericardial patch, followed by a 30 mm annuloplasty ring. Postoperative course was uncomplicated and antibiotic treatment with cotrimoxazole and rimactan was continued three weeks postoperatively. After one year the patient was stable and TTE showed no mitral valve regurgitation.

Conclusion: In contrast to other central nervous system (CNS) infections, S. lugdunensis mainly affects native heart valves and is more likely to be acquired through the community without an identifiable source of infection[2]. In S. lugdunensis septicemia careful monitoring and more frequent TTE should be obtained. In native valve endocarditis valve repair has been shown as a valuable alternative to valve replacement with decreased morbidity and mortality and no need for anticoagulation[3].

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