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## A Rare Case of Endocarditis Caused by Streptococcus Anginosus

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### Recommended Citation

Salinas Domene, Cecilia; Cha, Myung-Jin; Wong Alvarado, Ed; and Gaglani, Simita, "A Rare Case of Endocarditis Caused by Streptococcus Anginosus" (2024). *Research Colloquium*. 11.

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# **A Rare Case of Endocarditis Caused by Streptococcus Anginosus**

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## **Introduction:**

This is a 65-year-old male patient with infective endocarditis (IE) caused by *Streptococcus anginosus*. The patient presented with fever and chills. Past medical history included an aortic valve replacement after an episode of endocarditis. On physical examination, the patient had a new systolic murmur and poor dentition. Blood cultures on admission grew *Streptococcus anginosus* and a transesophageal echocardiogram (TEE) showed vegetation on the bioprosthetic valve.

## **Narrative:**

This is a 65-year-old male with a past medical history of bioprosthetic aortic valve replacement in 2014 due to IV drug use which reportedly ceased thereafter, who presented with multiple days of fever, chills, and lethargy. Initial examination revealed a new systolic heart murmur, poor dentition, and a fever.

Blood cultures grew *Streptococcus anginosus* which was treated with vancomycin and piperacillin/tazobactam. A transthoracic echocardiogram showed stage 1 diastolic dysfunction, mild aortic regurgitation, without valvular vegetation.

Cardiothoracic surgery recommended valve replacement and the patient was sent for extraction of all dentition to prevent reinfection. The patient was transferred to undergo replacement of the infected valve without complications.

## **Discussion:**

While *Streptococcus* is known to cause 60-80% of endocarditis, one study found that *Streptococcus anginosus* was the culprit organism for only 0.1% of cases.

Infections occurring between days and 6 months after valve replacements are considered early prosthetic valve endocarditis (PVE) and is caused by direct inoculation or hematogenous spread. In early PVE, these organisms are typically *Staphylococcus aureus*, coagulase-negative *Staphylococci*, gram-negative bacilli, and *Candida* species.

Late PVE is an infection of the prosthetic valve after 6 months. Endothelialization of tissue at the valve replacement changes the surface of the tissue which leads to the valve becoming susceptible to deposition of microthrombi to which organisms adhere. The organisms involved are typically *Streptococcus viridans*, *Staphylococcus aureus*, *Staphylococci*, and *enterococci*.

The preferred regimen for streptococcal PVE consists of a beta-lactam antibiotic for 6 weeks and an aminoglycoside for 2 weeks. Early surgical intervention for PVE is recommended for patients who develop recurrent bacterial emboli, if the size of the mobile vegetations exceeds 10 mm, or if heart failure develops.