

S. aureus can spread from blood to eye, endangering vision

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Nearly ten percent of cases of *Staphylococcus aureus* infections of the blood spread to the eyeball, according to a team of Korean clinical investigators. That spread can severely impair vision, and even cause blindness. The research was published January 11 in *Antimicrobial Agents and Chemotherapy*, a journal of the American Society for Microbiology.

Besides infection of the blood, [risk factors](#) for eyeball infection with *S. aureus* include endocarditis, the inflammation of the inside lining of the heart chambers and heart valves, and a *S. aureus* infection in more than one part of the body. Eye infections often lack symptoms, pointing up the importance of examining *S. aureus* patients to determine if the infection has spread, said corresponding author Yong Pil Chong, MD, PhD., assistant professor in the Department of Infectious Diseases, Asan Medical Center, University of Ulsan College of Medicine, Seoul, Republic of Korea.

"If patients have severe infection, such as endophthalmitis, local therapy, such as vitrectomy and intravitreal antibiotic injection is required in addition to systemic antibiotic therapy, said Chong. Endophthalmitis is an infection inside the eyeball, which is normally sterile. Vitrectomy is a surgery that can treat the disorder. "We have often observed patients who lost their vision after *S. aureus* bacteremia [blood infection]," said Chong.

In the study, the investigators analyzed post hoc the incidence and risk

factors for infections of the eye among 612 patients with *S. aureus* bacteremia ([blood infection](#)) who had been examined at a tertiary hospital in Seoul, S. Korea. Fifteen of these patients had endophthalmitis, and another 41 had chorioretinitis. The latter is an inflammation of the middle layer of the eye, which contains the vast majority of its blood vessels, and can also result in severe vision loss.

"In our study, no patients became blinded," said Chong. "But some patients sustained decreased vision, due to the ocular infection."

Early detection and treatment of ocular [infection](#) is critical to maintaining good vision, said Chong. "Therefore, we think that an eye examination is important in [patients](#) with *S. aureus* bacteremia."

More information: Jiwon Jung et al. Ocular involvement of bacteremia: incidence and risk factors , *Antimicrobial Agents and Chemotherapy* (2016). [DOI: 10.1128/AAC.02651-15](https://doi.org/10.1128/AAC.02651-15)

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