

R426

Publication Only

Infection Control: Infection control

A possible outbreak of conjunctivitis due to the contamination of topical anaesthetic solutions with *Kytococcus sedentarius*

T. Demir¹, F. Milletli Sezgin¹, O. Kocamis²

¹Clinical Microbiology, Ahi Evran University Research and Teaching Hospital, Kirsehir, Turkey ;

²Ophthalmology, Ahi Evran University Research and Teaching Hospital, Kirsehir, Turkey

Objectives: Common causes of bacterial conjunctivitis, an inflammation of the bulbar and/or palpebral conjunctivas, include staphylococci, streptococci, gonococci, and Chlamydia. *Kytococcus sedentarius* is an aerobic, catalase positive, spherical, gram-positive organism. It is usually a harmless skin organism but rarely can be associated with serious infections ranging pitted keratolysis to fatal pneumonia, peritonitis and endocarditis. A microbiologic investigation was carried out for a conjunctivitis epidemic included five patients admitted to Ahi Evran University Research and Teaching Hospital, Ophthalmology Clinic between the time period of July-October 2013.

Methods: Five patients all admitted to the ophthalmology clinic one week after the previous visit with the symptoms of redness, purulent secretion and periorbital edeme were included in the study. So as to detect the source of infection, eye swab samples of the patients and solutions containing topical anesthetic materials sucked into a paper containing floresein was analysed microbiologically. One microliter of the solution was inoculated onto blood agar, eosin-metylen-blue agar and chocolate agar and incubated for five days at 37°C both aerobically and microaerophilic conditions. Additionally, ten microliters of the solution was santrifuged and then inoculated onto agar medium. Same application was done fort he swab samples. After incubation period strain identification and antimicrobial susceptibility testing was performed by VITEK 2 Compact (bioMerieux, France) automated system according to the CLSI guidelines. Additionally, Kirby-Bauer disk diffusion testing was performed and interpreted according to the CLSI guidelines using the suggested zone diameter breakpoints for coagulase-negative *Staphylococcus* spp.

Results: At the second day of the incubation tiny, white-grey colored colonies on chocolate agar and blood agar were detected. Gram-positive coccus and diplococcus were seen on Gram-staining of the smear. Identification and antimicrobial susceptibility of the strain was performed by VITEK 2 Compact (bioMerieux, France) and identified as *Kytococcus sedentarius*. Our attempts to recover *K. sedentarius* from the eye swab of the patients were unsuccessful and no growth was observed. The isolate was resistant to erythromycin, penicillin G and susceptible to oxacillin, ciprofloxacin, penicillin, tetracycline, chloramphenicol, vancomycin and polymyxin B. The patients were treated with tetracycline and the infection was resolved with complete cure.

Conclusions: Although, we identified *Kytococcus sedentarius* from the topical solution, we could not identify the source of outbreak clearly as we could not observe any growth in eye swab samples. The mode of contamination also remains unclear. In conclusion, it is emphasized that changing the intensity of the solution at least weekly and treating in accordance with the rules of sterility is important to prevent future outbreaks.