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Investigation of microbial contamination of soft contact lenses and their care accessories among asymptomatic users

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Summary



■ **Background:**

With the growing usage of contact lenses, the incidence of corneal or conjunctival inflammation and infection is also increasing [1].



■ **Aim:**

To evaluate the level and profile of microbiological contamination on contact lenses and care accessories in asymptomatic users.

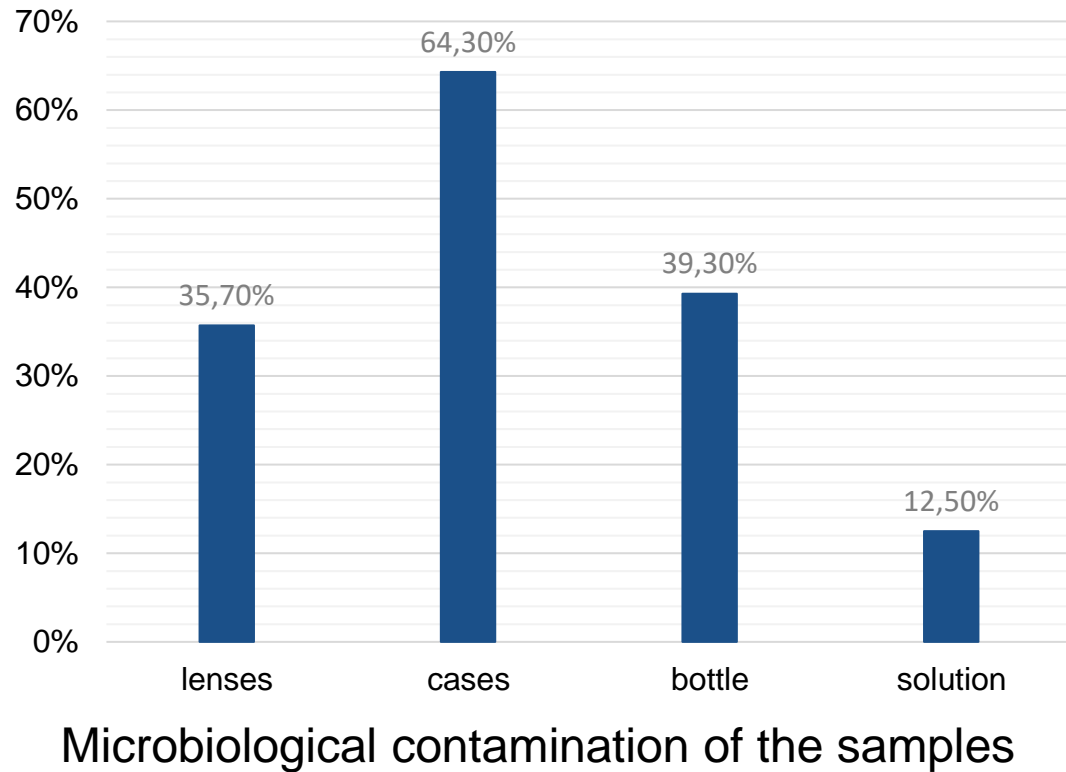


■ **Methods:**

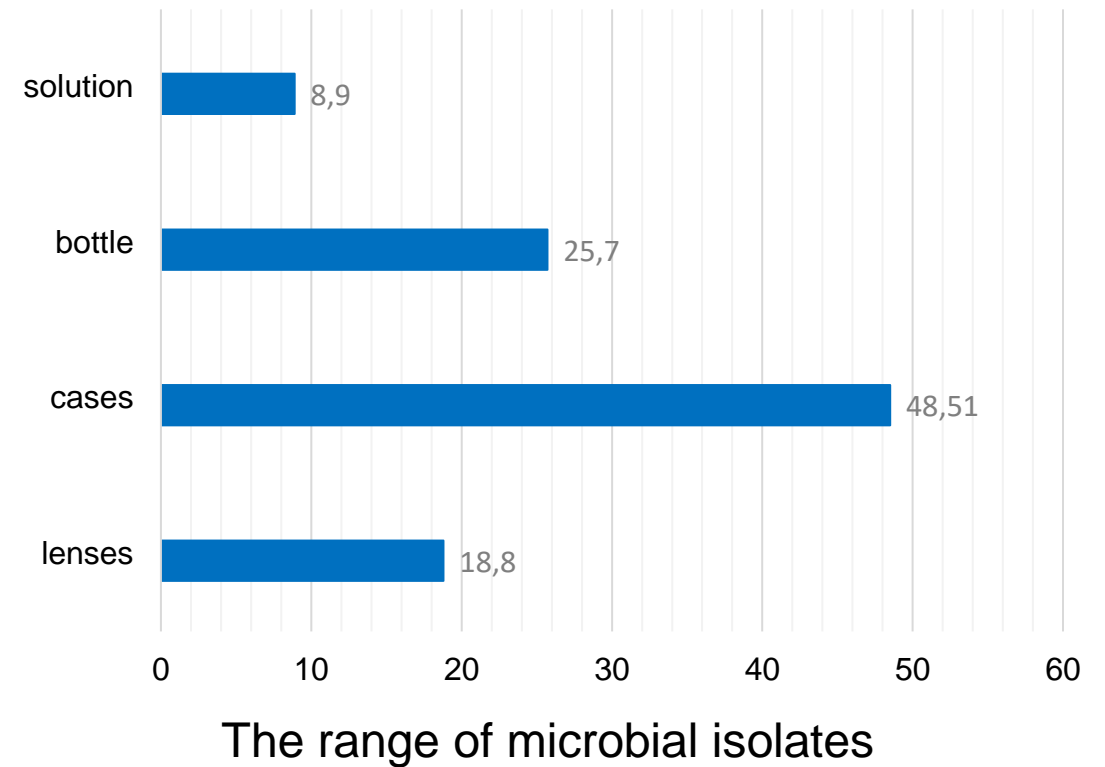
Four samples each from 56 lens users were collected including from inner surface of lenses, storage containers, multipurpose solutions and their bottles. Isolated microorganisms were identified using standard cultivation and identification methods. The association between microbiological contamination and lens hygiene was evaluated with anonymous questionnaire. The statistical analysis was performed with „IBM SPSS® Statistics 24.0”. The research was carried out at Vilnius University in 2019.

Results I

- 224 samples were taken and the most contaminated items were lens cases – 64.3%, the lowest incidence appeared in lens solutions – 12.5%.

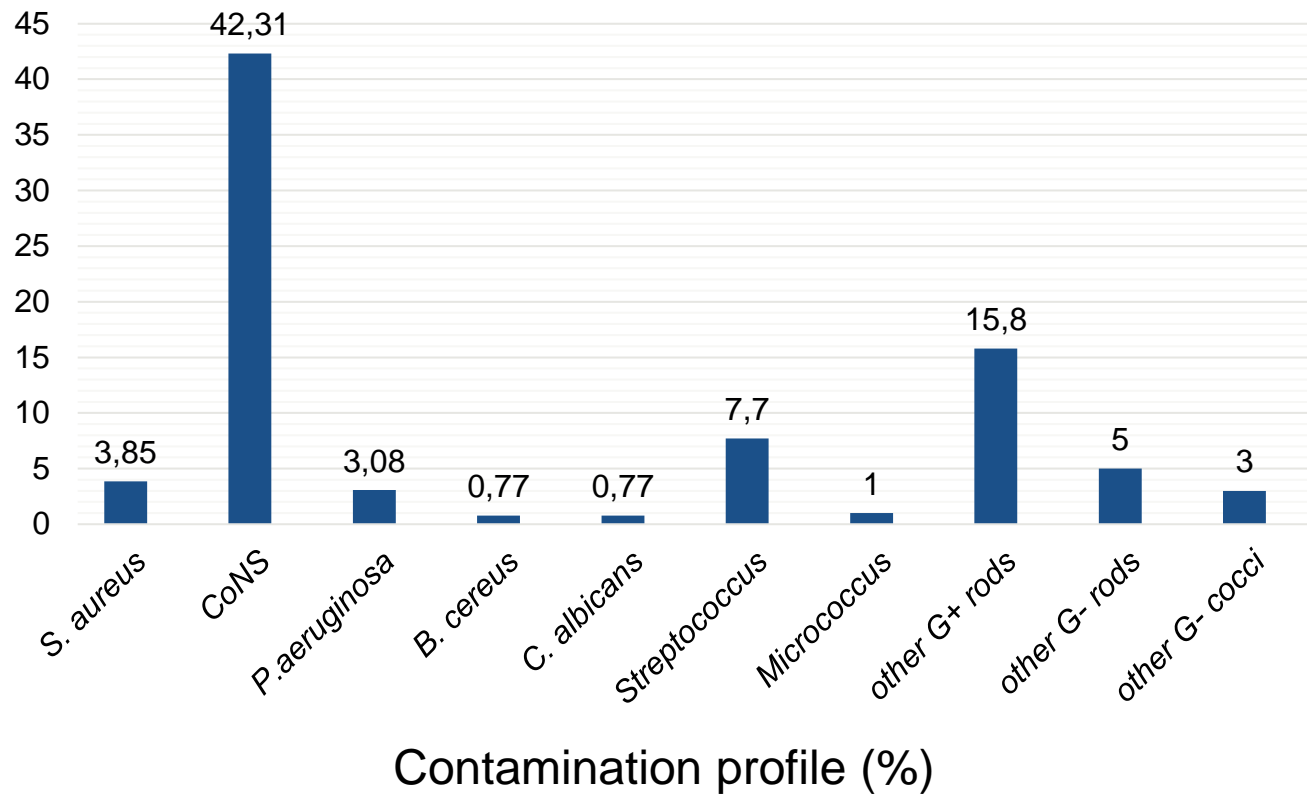


- Lens cases demonstrated the widest range of microbial isolates.

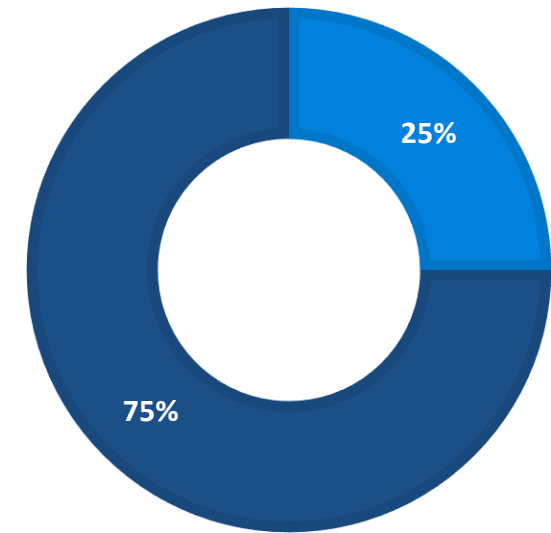


Results II

- The most common isolated microorganisms were Coagulase-negative staphylococci (42.3%).



- 25% of respondents showed unsatisfactory lens hygiene skills.



■ insufficient ■ sufficient

Hygiene skills

Conclusions



78.6% of samples were contaminated.



Lens cases were most contaminated and had highest range of isolates.



25% of respondents shown deficient hygiene skills of contact lenses and lens care systems.



No statistically significant relation between contamination and hygiene behaviour were found.

