Microbial contamination of contact lens care accessories and level of compliance in soft contact lens wearers

Purpose
To determine the nature of microbial contamination of the care accessories, and the level of compliance in a group of soft contact lens wearers.

Method
Thirty asymptomatic patients of mean (SD) age 27 (6.4) years and who have been wearing soft contact lenses for > 6 months were asked to bring their care accessories for analysis. They were given a new set of accessories and were required to return the accessories for test after one month. This was repeated twice such that a total of three sets of samples were obtained. Swabs from the care accessories were cultured on Blood agar (BA), Chocolate agar (CHO) and Sabouraud dextrose agar (SDA) within one hour of collection. BA and CHO were incubated for 48 h and SDA for 2 weeks. Isolates were identified by standard biochemical methods. Each subject was asked to complete a questionnaire regarding care procedures at the first visit.

Results & Conclusion
Contamination rates of multipurpose solutions, saline, and artificial tears were 38%, 22%, 20% respectively. For cases and tweezers, the contamination rates were 33% and 8% respectively. The most common pathogens isolated were Staphylococcus aureus and Serratia marcescens. Reductions in the contamination rates were only observed for solutions in the second set of samples; no significant improvement was observed for lens cases and tweezers. Compliance was lowest for care of lens cases and highest for care of lenses.

It may be difficult to improve compliance in long term wearers of contact lenses. This lack of compliance exposes them to increased risk of infection. There is therefore a need for practitioners to regularly stress and monitor compliance.

(Data collection still on-going. Only the results of analysis of the first two sets of samples will be presented)