

ABSTRACT

Aims

Recently, a new rebound tonometer has been introduced into the market, which might be useful for glaucoma screenings in developing countries. Disposable probes, that are potentially reusable, are recommended by the manufacturer. Our study aimed to address the question of microbial transmission risks if the probes are reused.

Methods

IOP measurements were obtained from 100 healthy eyes. The used probes were inoculated on broth and culture media. In addition, 10 probes were analyzed using environmental scanning electron microscopy in saturated hydrogen-steam atmosphere after usage and wipe disinfection technique with Sekusept 4% solution or Isopropanol 70%.

Results

No bacterial or fungal growth could be detected in any of the inoculated agar plates or broth tubes. No microorganisms, clumps of cells, or single intact epithelium cells were detected in any of the probes using environmental scanning electron microscopy. Cell debris was detected on seven probes; three probes were completely free of any residual cell elements.

Conclusion

Transmission of possibly infective material through reused probes is significantly less than for reusable Goldmann probes if the same sterilization protocols are applied. Re-usage of the probes appears safe and is helpful in avoiding unnecessary costs.