S Afr Med J. 2013 Feb 19;103(6):386-9. doi: 10.7196/samj.6385.

Bacterial contamination of re-usable laryngoscope blades during the course of daily anaesthetic practice.

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Abstract

BACKGROUND AND OBJECTIVES: Hospital-acquired infections (HAIs) are largely preventable through risk analysis and modification of practice. Anaesthetic practice plays a limited role in the prevention of HAIs, although laryngoscope use and decontamination is an area of concern. We aimed to assess the level of microbial contamination of re-usable laryngoscope blades at a public hospital in South Africa.

SETTING: The theatre complex of a secondary-level public hospital in Johannesburg.

METHODS: Blades from two different theatres were sampled twice daily, using a standardised technique, over a 2-week period. Samples were quantitatively assessed for microbial contamination, and stratified by area on blade, theatre and time using Fisher's exact test.

RESULTS: A contamination rate of 57.3% (63/110) was found, with high-level contamination accounting for 22.2% of these. Common commensals were the most frequently isolated micro-organisms (79.1%), but important hospital pathogens such as Enterobacter species and Acinetobacter baumannii were isolated from blades with high-level contamination. No significant difference in the level of microbial contamination by area on blade, theatre or time was found ($p<0.05$).

CONCLUSIONS: A combination of sub-optimal decontamination and improper handling of laryngoscopes after decontamination results in significant microbial contamination of re-usable laryngoscope blades. There is an urgent need to review protocols and policies surrounding the use of these blades.

PMID: 23725957 [PubMed - indexed for MEDLINE]