

REFERENCE MATERIAL

VISIBLE AND OCCULT BLOOD ON LARYNGOSCOPES RA PHILLIPS

Incidence of visible and occult blood on laryngoscope blades and handles

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Abstract

Anesthesia providers must take appropriate precautions to reduce the potential for transmission of infectious agents to the patients under their care. The devastating spread of human immunodeficiency virus (HIV) and hepatitis B virus (HBV) over the past decade has resulted in the development of specific guidelines for the cleaning, disinfection, sterilization, and handling of medical equipment and instruments. Contamination of laryngoscope blades and handles with visible and occult blood frequently occurs during routine airway management. Several studies suggest procedures for cleaning, disinfection, sterilization, or handling of laryngoscope blades and handles are ineffective, or there may be poor compliance with the established protocols. The purpose of this study was to determine the incidence of visible and occult blood on laryngoscope blades and handles that were identified as ready for patient use. Sixty-five laryngoscope blades and handles identified as ready for patient use were observed for visible blood and tested for occult blood. A modified version of the three-stage phenolphthalein blood indicator test was employed to determine the presence of occult blood. None of the blades or handles observed had visible blood. Of the 65 blades tested for occult blood, 13 (20%) tested positive. Of the 65 handles tested for occult blood, 26 (40%) tested positive. More afternoon blades and handles tested positive for occult blood than morning blades and handles ($P < 0.01$). The extent to which contaminated anesthesia equipment plays in nosocomial infection is difficult to determine. The presence of blood is an indicator of potential cross-infection, since biological fluids, such as blood and saliva, are known to transmit infectious diseases. This study confirms that more rigorous decontamination protocols must be instituted to ensure complete removal of blood prior to sterilization, since laryngoscope blades and handles have irregular surfaces with repositories for infectious material.