

Successful Intubation Using Retrograde Trans-Tracheal Illumination in Laryngoscope Light Source Failure.

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Introduction:

Properly functioning equipment is critical during direct laryngoscopy for endotracheal intubation. When the light source on a laryngoscope fails, proper visualization of the glottic opening is then extremely difficult in the then dark vault of the oropharynx, and alternative endotracheal intubation techniques must often be employed in a time sensitive manor. Laryngoscopic light source failure may be more common in certain practice environments where equipment is prone to damage, improper maintenance, or scarcity (i.e. pre-hospital care, code blue carts, remote care facilities).

Methods/Results:

In this case report we describe the use of a standard flashlight to produce retrograde transtracheal illumination of the glottis to facilitate direct laryngoscopy and endotracheal intubation during light source failure on a standard laryngoscope. A flashlight was placed in apposition to the cricothyroid membrane resulting in retrograde trans-illumination of the glottis during laryngoscopy with the malfunctioning laryngoscope. The laryngeal structures “glowed red”, the glottic opening was easily identified, and endotracheal intubation proceeded without complication. The patient went on to have an uneventful operative course, and was extubated without incident postoperatively.

Conclusion:

This novel technique could be used in situations of laryngoscope malfunction, when a replacement laryngoscope is not readily available, and where an alternative light source (such as a flashlight, headlamp, or other light source) is available, to provide adequate visualization of airway structures in order to facilitate intubation. We have been able to reproduce this effect in a variety of patients on an elective basis with excellent success.