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IN REPLY

In reply: Glottic impersonation, perhaps, but direct visualization remains vital to confirm successful intubation

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To the Editor,

We greatly appreciate the interest from Bowness *et al.*[1] and welcome their detailed commentary, most of which we agree with. With experience, time, and a scenario void of duress, differentiating the glottic inlet from the esophagus as displayed in our "glottic impersonation" image should not be difficult.[2] We would, however, caution against anything that might lead a reader to conclude that misidentification of the glottic inlet can threaten only inexperienced or infrequent airway managers. Esophageal intubation in cases that were not considered difficult remain an important cause of airway-related medicolegal action.[3] We teach our learners the importance of relational anatomy that allows orientation and cognitive confirmation of where structures should be located based on a positive identification of a known piece of the airway's anatomical puzzle. The educational value of our glottic impersonation image is to visualize both the esophagus and glottic inlet in a single image for comparison. Given the modified original image (see Figure) that simulates a situation where one might not have the full reference to the glottic inlet, misidentification becomes a more realistic threat. Indeed, we all have a tendency to see what we want to see and often fail to see what we do not expect to see.

Bowness *et al.* also outlined an example of where no end tidal carbon dioxide was seen on capnography due to pronounced bronchospasm after intubation. The 4th National Audit Project study, however, outlined where similar thinking could spell disaster – e.g., the assumption that absent waveform capnography was the result of low cardiac output rather than erroneous esophageal intubation.[4] Dismissing non-confirmatory capnography may be another form of seeing what we want to see. Pilots, sailors, and drivers know that it is dangerous to ignore their instruments unless they have absolute confirmation of the same information. We also simply, but strongly, suggest that airway managers do the same. This is why we politely disagree with the conclusions of Bowness *et al*. that visualization is a superior method of confirming endotracheal tube position. Furthermore, clinical decisions are rarely binary. This is particularly important when our clues and data points are neither fully sensitive nor specific – and when error could mean death. Visualization is certainly an important component of establishing correct endotracheal intubation, but it cannot always be trusted in isolation. Thus, we stand by our contention that capnography is indispensable. If there remains any question about the endotracheal tube position, flexible bronchoscopy is also extremely valuable.

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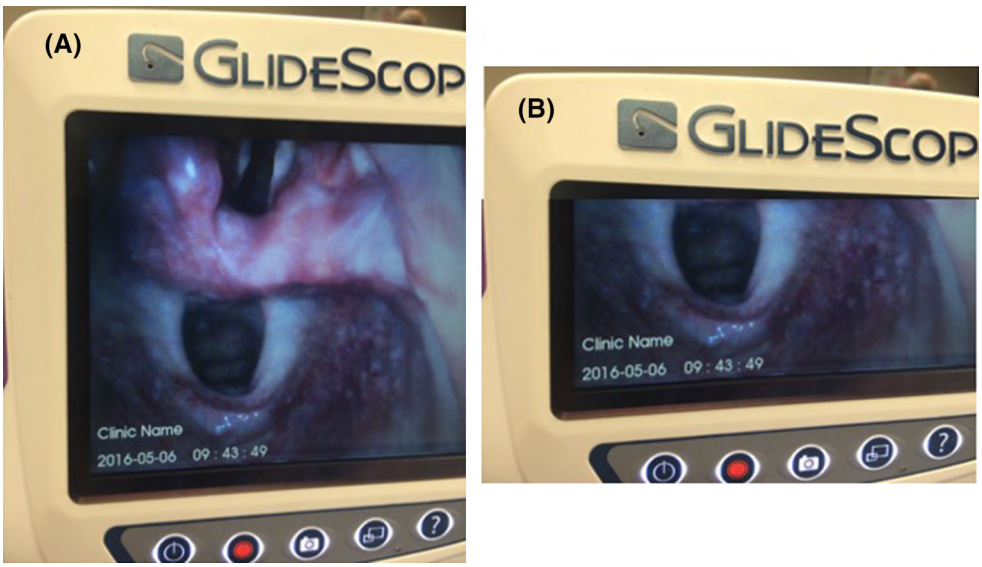

Figure Video laryngoscopic view (A) of both the glottic inlet anteriorly and esophagus posteriorly in a cadaveric intubation model demonstrating our previous report of "glottic impersonation." When the image is edited (B) to simulate a less-full video laryngoscopic view that one might obtain under less ideal and more hurried conditions, it is easy to see how the esophageal inlet could be mistaken for the glottic inlet

Conflicts of interest None declared.

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