Endotracheal Tube Damage in the Presence of Bite Block

To the Editor.—We have read with interest the report of ventilatory compromise secondary to occlusion of an endotracheal tube’s pilot balloon tubing by a malpositioned bite block.¹ We would like to briefly describe a case of endotracheal tube (ET) damage in the presence of a Sontek bite block (Sontek Medical Inc., Hingham, MA).

A 34-yr-old intubated man was admitted to our intensive care unit for elective postoperative ventilation after severe head injury. He was sedated with morphine and thiopentone infusions. On the ninth postoperative day, the sedation was discontinued for neurologic assessment. The patient became agitated, so he was sedated again with propofol. During withdrawal of the propofol, he became agitated again and started biting the tube. The Sontek bite block was placed on the ET tube to prevent biting. There was a small leak heard from the ET tube after 12 h, which was therefore changed. The cuff was intact, but there were numerous bite marks on the bite block and on the ET tube. There was also a small hole on the ET tube (fig. 1).

Two possible mechanisms could explain the ET tube damage in our case. The bite block (which is available in only one size) does not fit tightly on the smaller ET tubes, making it difficult to firmly fix the ET tube to the side of the mouth. Head movement might have caused the bite block to slip from the original position, allowing the patient to bite the ET tube. The other possibility is that when the bite block is fixed to the side of the mouth, the portion of the tube above and below the bite block can become partially and repeatedly kinked by the head movement, with eventual erosion of the wall.

This problem should be recognized by all intensive care unit personnel, and regular monitoring of the bite block might be necessary whenever it is used.

Fig. 1. Damaged endotracheal tube with bite block in place.

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Reference

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