

Application of the Truview EV02 optical laryngoscope to patients with cervical spinal disease

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To the editor: For safe tracheal intubation in patients with cervical spinal problems, various instruments and methods have been reported [1]. We evaluated whether tracheal intubation in these patients could be performed safely using the Truview EV02 (Truphatek, Israel; EV02 hereafter), an optical laryngoscope which does not require neck extension and allows accurate observation of the vocal cords even with the patient in the horizontal head position [2,3].

The EV02 has a curved blade, consisting of a straight blade part and a curved tip (horizontal elevation angle, 40°) and an optical viewer. The glottic opening procedure using the EV02 is similar to the routine laryngoscopic procedure and does not require the learning of any special skill. The EV02 provides clearer and wider-angle views than the direct vision provided by conventional laryngoscopes, and it allows accurate observation of the passage of the tracheal tube to the area between the vocal folds [2].

Here, we describe the use of the EV02 in three patients. In patient 1, a 76-year-old man, resection of a brain tumor by craniotomy was planned. X-ray examination of the neck showed superior intervertebral disc degeneration and spondylosis associated with chronic rheumatoid arthritis, and limita-

tions in neck extension were observed. Because he complained of neck discomfort in the neck-flexed position, the laryngoscope was introduced while he was in the horizontal head position. When using a Mackintosh laryngoscope without neck extension, the view of glottic visualization was Cormack and Lehane grade IV. When the larynx was observed using the EV02, the vocal cords could be visually confirmed, and tracheal intubation was readily performed.

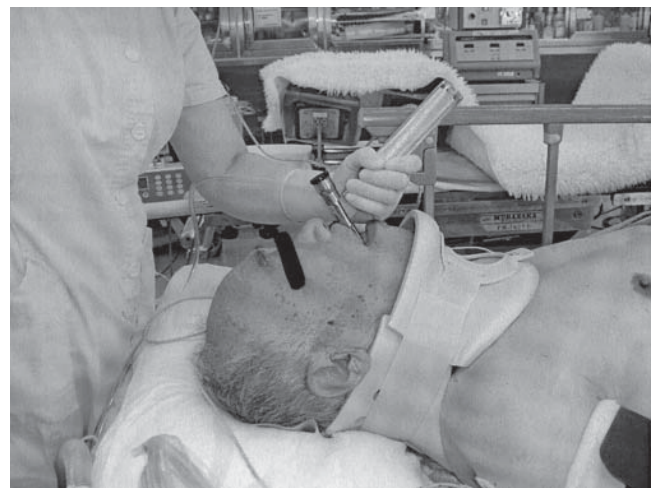
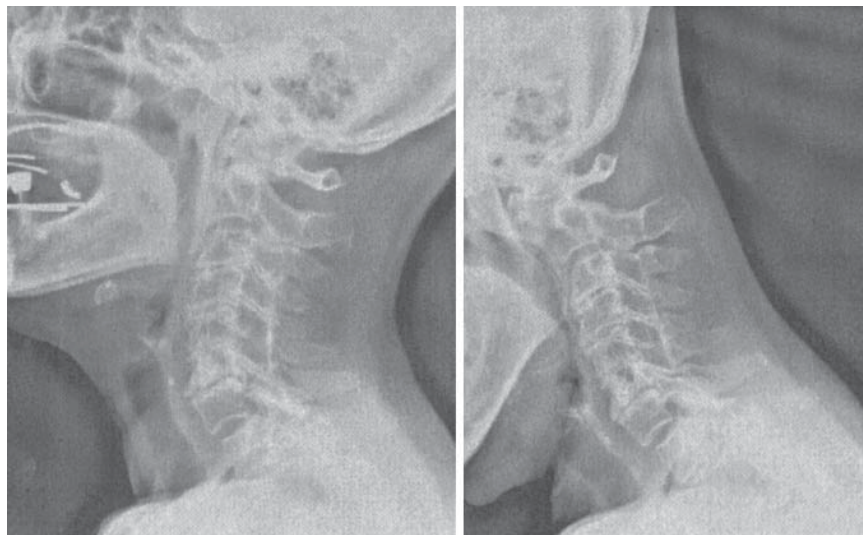


Fig. 1. Photograph of a 79-year-old man in whom the larynx was observed, while he wore a Philadelphia cervical collar, when the Truview EV02 (Truphatek, Israel) was used



A

B

Fig. 2A,B. Radiographs show lateral cervical vertebrae in a 68-year-old woman. **A** Natural neck position. **B** Forward bending position. Atlanto-axial subluxation is observed in the forward bending position

In patient 2, a 79-year-old man, emergency cervical cord decompression was performed due to acute exacerbation of cervical spondylotic myelopathy. For the protection of the cervical spine, he wore a Philadelphia cervical collar. Inquiry before anesthesia showed no exacerbation of neurological symptoms due to the use of this collar. With the patient under anesthesia with propofol, the larynx was observed using the EV02, and the vocal cords could be visually confirmed (Fig. 1). A muscle relaxant was administered, and tracheal intubation was performed.

In patient 3, a 68-year-old woman with atlantoaxial subluxation due to chronic rheumatoid arthritis (Fig. 2), spinal fixation was planned. She was wearing a Philadelphia cervical collar when she was brought into the operation room. No exacerbation of neurological symptoms due to the use of the collar was observed. Anesthesia was initiated with the patient in the horizontal head position and wearing the cervical collar. With the patient under anesthesia with propofol, the larynx was observed using the EV02. After these procedures followed by a muscle relaxant administration, tracheal intubation was successfully performed.

The EV02 does not require neck extension in glottic visualization and it allows the visual confirmation of the vocal cords even when the patient is wearing a Philadelphia cervical

collar and has limitations in mouth opening. The manipulation procedure of the EV02 is similar to the routine laryngoscopic procedure. In addition, because repetitive procedures are easy and safe using the EV02, to avoid bucking, a muscle relaxant can be administered, after visual confirmation of the vocal cords, and tracheal intubation.

The use of optical laryngoscopes such as the EV02 may compensate for the disadvantages of awake fiberoptic intubation, and their use allows safe tracheal intubation.

References

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