

Anterior tonsillar pillar perforation during Glide Scope® video laryngoscope guided-intubation in an intubation patient with expected difficulty: a case report

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Abstract

There are several devices currently used to improve glottic view in patients with difficult intubation. The GlideScope® video laryngoscope is a fixed 60° angle laryngoscope blade, with embedded high-resolution camera and separate monitor screen. It is an optional method, especially for difficult intubation, as it improves the epiglottic tip and vocal cord visualization (Cormack and Lehane grade 3 and 4). GlideScope® application and intubation even provides the potential advantage of a certain step that is extremely important in avoiding oral cavity and oropharyngeal injuries. This report describes a case of anterior tonsillar perforation, which was detected immediately during endotracheal intubation guided by GlideScope®. **Chiang Mai Medical Journal 2013;52(1-2):33-35.**

Keywords: anterior tonsillar pillar perforation, GlideScope® video laryngoscope, difficult intubation

Case report

A 42-year old female diagnosed as pituitary macroadenoma was scheduled for a right fronto-temporal craniotomy to remove a sellar mass. The hormonal abnormality included a reduction in morning serum cortisol. She was supplemented with oral prednisolone at 20 mg daily, which was converted to hydrocortisone at 100 mg intravenously every 8 hours perioperatively.

The patient was expected to have difficult

intubation because of macroglossia and Mallampati classification grade III. Therefore, the GlideScope® video laryngoscope (GVL) and a GlideRite® Rigid stylet loaded endotracheal tube size 7.0 were prepared. General anesthesia was induced with propofol, midazolam, and cis-atracurium. The target control infusion of propofol was set at 6 µg/ml and titrated to 8 µg/mL during the intubation period. The GVL was inserted into the midline position over the tongue. However, the tip of the epiglottis was not visualized

in the first two attempts of the application. On the third attempt, the epiglottic tip was seen by using the Backward, Upward, and Rightward Pressure or BURP technique. Bleeding was observed through the suction catheter during difficult advancement of the endotracheal tube,



Figure 1. Perforated right anterior tonsillar pillar.

which was removed immediately; and right anterior tonsillar pillar perforation was found. The lesion is shown in Figure 1. Gauze was packed tightly on the lesion and the otolaryngologist consulted. Suture of the right anterior tonsillar pillar was performed after completion of craniotomy surgery, as shown in Figure 2.

The patient was extubated on the second day post craniotomy surgery. Mild to moderate sore throat (visual analog scale, VAS 4-6) during swallowing was reported.

Discussion

During intubation by a direct laryngoscope, anesthesiologists can visualize directly passage of the tube along the oropharynx through the vocal cord. On the contrary, tube advancement in the oral cavity and oropharynx is not shown on a separate monitor screen during the GVL application [1]. As the scope is elevated by the intubator, the tonsillar pillar membrane stretches. The tip of the endotracheal tube cannot be seen on the monitor screen during passage of the tube in the oral cavity. The thin right anterior tonsillar pillar membrane is stretched, and the limited oral cavity yields a potential risk of oropharyngeal injuries [1, 2]. The GlideScope® blade is



Figure 2. Sutured right anterior tonsillar pillar.

placed over the tongue during direct laryngoscopy, unlike the conventional Macintosh blade application that approaches from the right oral cavity and sweeps the tongue to the left [3-5]. The latter method is a major cause of even more limited oral cavity, particularly in patients with difficult intubation. Therefore, the anesthesiologist needs to look at the tip of endotracheal tube closely during insertion into the oral cavity. The monitor screen should be watched only after the tip of the endotracheal tube is presented [4, 6].

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Permission for publication of this case report was given by the patient's next of kin.

Competing interests

The authors declare that there was no external funding or competing interests.

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การฉีกขาดของเยื่อทอนซิลส่วนหน้า (anterior tonsillar pillar) ขณะใส่ท่อช่วยหายใจด้วยอุปกรณ์ GlideScope ในผู้ป่วยที่ใส่ท่อช่วยหายใจยาก

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ปัจจุบันมีอุปกรณ์ช่วยในการใส่ท่อช่วยหายใจหลากหลายชนิด หนึ่งในนั้นคือ GlideScope ซึ่งประกอบด้วย laryngoscope ที่ทำมุม 60 องศาที่ด้านจับต่อเข้ากับจอภาพ ทำให้วิสัญญีแพทย์เห็นกล่องเสียงจากจอภาพแทนการมองผ่านเข้าไปในช่องปากผู้ป่วยโดยตรง เชื่อว่าการใส่ท่อช่วยหายใจผ่านการมองเห็นจากจอภาพจะช่วยให้ใส่ท่อช่วยหายใจได้สำเร็จมากขึ้น โดยเฉพาะในผู้ป่วยที่วิสัญญีแพทย์ประเมินแล้วว่าน่าจะมีโอกาสใส่ท่อช่วยหายใจยาก อย่างไรก็ตามการทราบถึงข้อจำกัดของอุปกรณ์ GlideScope รวมถึงข้อควรระวังในการใส่ท่อช่วยหายใจผ่านการมองเห็นจากจอภาพ จะช่วยลดการบาดเจ็บต่อริมฝีปาก โครงสร้างในช่องปากและคอของผู้ป่วยได้ ในรายงานฉบับนี้ คณะผู้วิจัยได้รายงานผู้ป่วยที่เกิดการฉีกขาดของเยื่อทอนซิลส่วนหน้า ขณะใส่ท่อช่วยหายใจผ่านทาง GlideScope *เชียงใหม่เวชสาร* 2556;52(1-2):33-35.

คำสำคัญ: การฉีกขาดของเยื่อทอนซิลส่วนหน้า อุปกรณ์ GlideScope ผู้ป่วยที่ใส่ท่อช่วยหายใจยาก

