

## CLINICAL IMAGES

## Acute epiglottitis following traditional Chinese *gua sha* therapy

Keng-Kuang Tsai MD, Chih-Hung Wang MD PhD

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**Affiliations:** Department of Otolaryngology, Head and Neck Surgery, Tri-Service General Hospital, National Defense Medical Center (Tsai, Wang) and Songshan Branch (Tsai), Taipei, Taiwan, Republic of China; and Graduate Institute of Medical Sciences, National Defense Medical Center (Wang), Taipei, Taiwan, Republic of China.

**Correspondence to:** Chih-Hung Wang, chw@ms3.hinet.net

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**Figure 1:** (A) Ecchymoses on the neck of a 23-year-old man after receiving traditional Chinese *gua sha* therapy for throat pain. (B) Radiograph of the patient's neck showing an elevated hyoid bone, swelling of the pre-epiglottic space (asterisk), a decrease in vallecular air space (the vallecule sign; arrowhead) and thickening of the retropharyngeal soft tissues (arrows) causing a narrowed airway.

A 23-year-old man presented to the emergency department with difficulty speaking after receiving traditional Chinese *gua sha* therapy on his neck (i.e., scraping of the skin) to treat throat pain that had lasted for two days.

On examination, the patient had clearly visible ecchymoses on the front and sides of his neck (Figure 1A). Although the patient was drooling, he was not in respiratory distress, and there was no stridor. He was afebrile, with normal vital signs. Laryngoscopy showed an enlarged epiglottis pushed against the posterior pharyngeal wall. A radiograph of the patient's neck showed an elevated hyoid bone and thickening of the retropharyngeal soft tissues (Figure 1B). We administered steroids intravenously, and the patient's dysphonia resolved within two hours. A subsequent laryngoscopic examination showed reduced swelling of the patient's epiglottis.

Epiglottitis, also called supraglottitis, is an inflammation of the epiglottis or supraglottic structures. Although usually related to bacterial infection, acute epiglottic swelling and airway obstruction

have also been linked to thermal injury and blunt trauma.<sup>1</sup> *Gua sha* therapy involves repeated stroking, with pressure, over lubricated skin using a smooth-edged instrument, such as a spoon or coin. Inappropriate application of the procedure can cause a contusion injury to underlying soft tissue,<sup>2</sup> as in our patient's case.

In our patient, the acute epiglottic swelling induced by *gua sha* appears to have involved injuries to the pre-epiglottic and retropharyngeal spaces, and a corresponding "vallecule sign" (i.e., poorly defined vallecule secondary to swelling of surrounding tissues) was seen, instead of a more typical radiographic "thumb sign" (i.e., thickening of the epiglottis).<sup>3</sup>

### References

1. Parsons DS, Smith RB, Mair EA, et al. Unique case presentations of acute epiglottic swelling and a protocol for acute airway compromise. *Laryngoscope* 1996;106:1287-91.
2. Nielsen A. Gua sha research and the language of integrative medicine. *J Bodyw Mov Ther* 2009;13:63-72.
3. Ducic Y, Hebert PC, MacLachlan L, et al. Description and evaluation of the vallecule sign: a new radiologic sign in the diagnosis of adult epiglottitis. *Ann Emerg Med* 1997;30:1-6.