

PROGRESSIVE BILATERAL VOCAL CORD PARALYSIS AFTER SEVERE TRAUMATIC SUBDURAL HEMATOMA

Chan-yang Kim, M.D, Eun-sil Kim, M.D
Department of Rehabilitation Medicine, Presbyterian Medical Center (Jesus Hospital)

BACKGROUND

- **Bilateral vocal cord paralysis (VCP)** is an uncommon but clinically significant condition that impairs airway protection and swallowing.
- It is most often associated with surgical injury, tumor compression, or peripheral nerve damage; however, persistent severe intracranial pathology may also contribute through a central mechanism.
- We report progressive bilateral VCP following **severe traumatic subdural hematoma (SDH) with sustained mass effect** and worsening dysphagia during rehabilitation.

CASE DESCRIPTION (91/F)

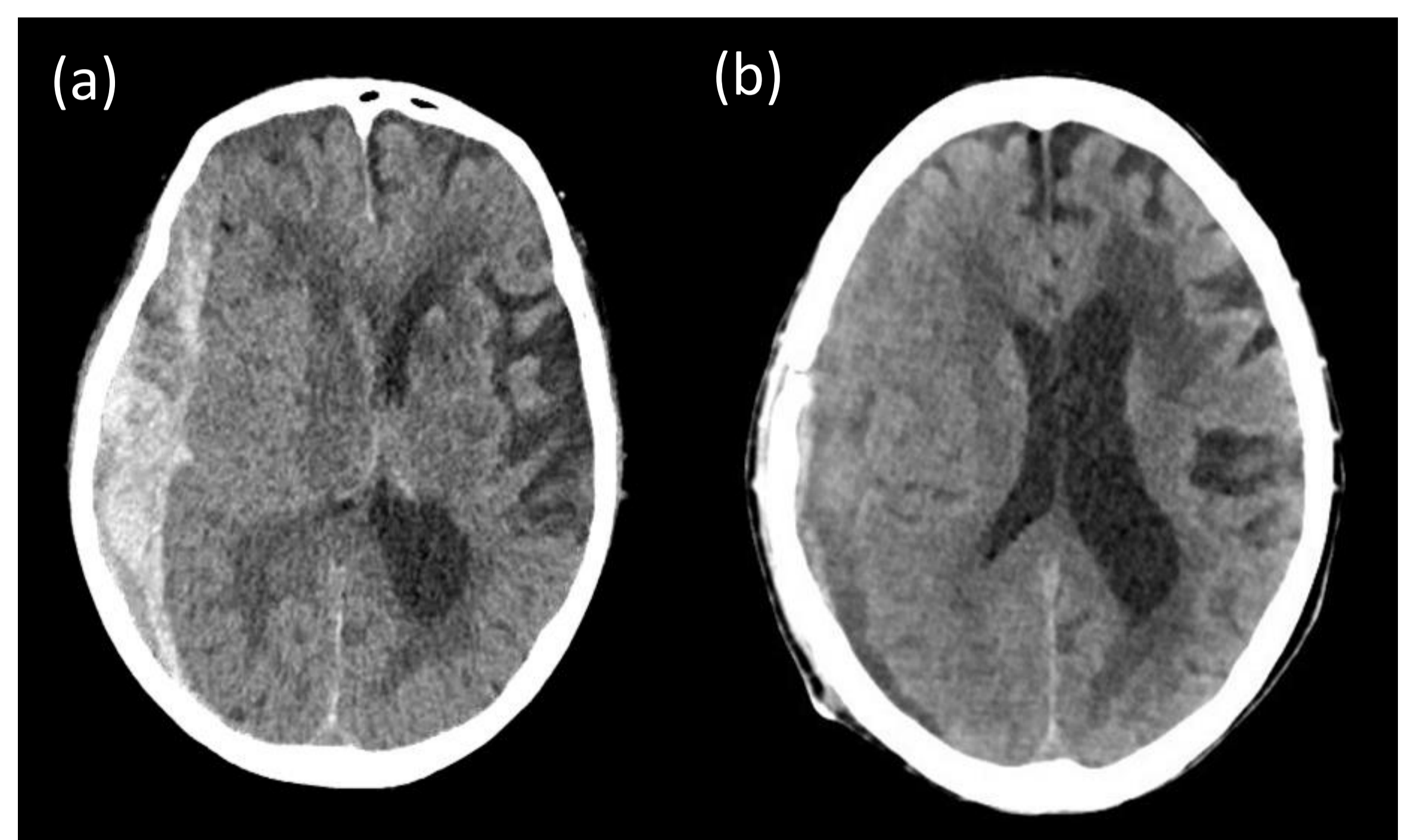
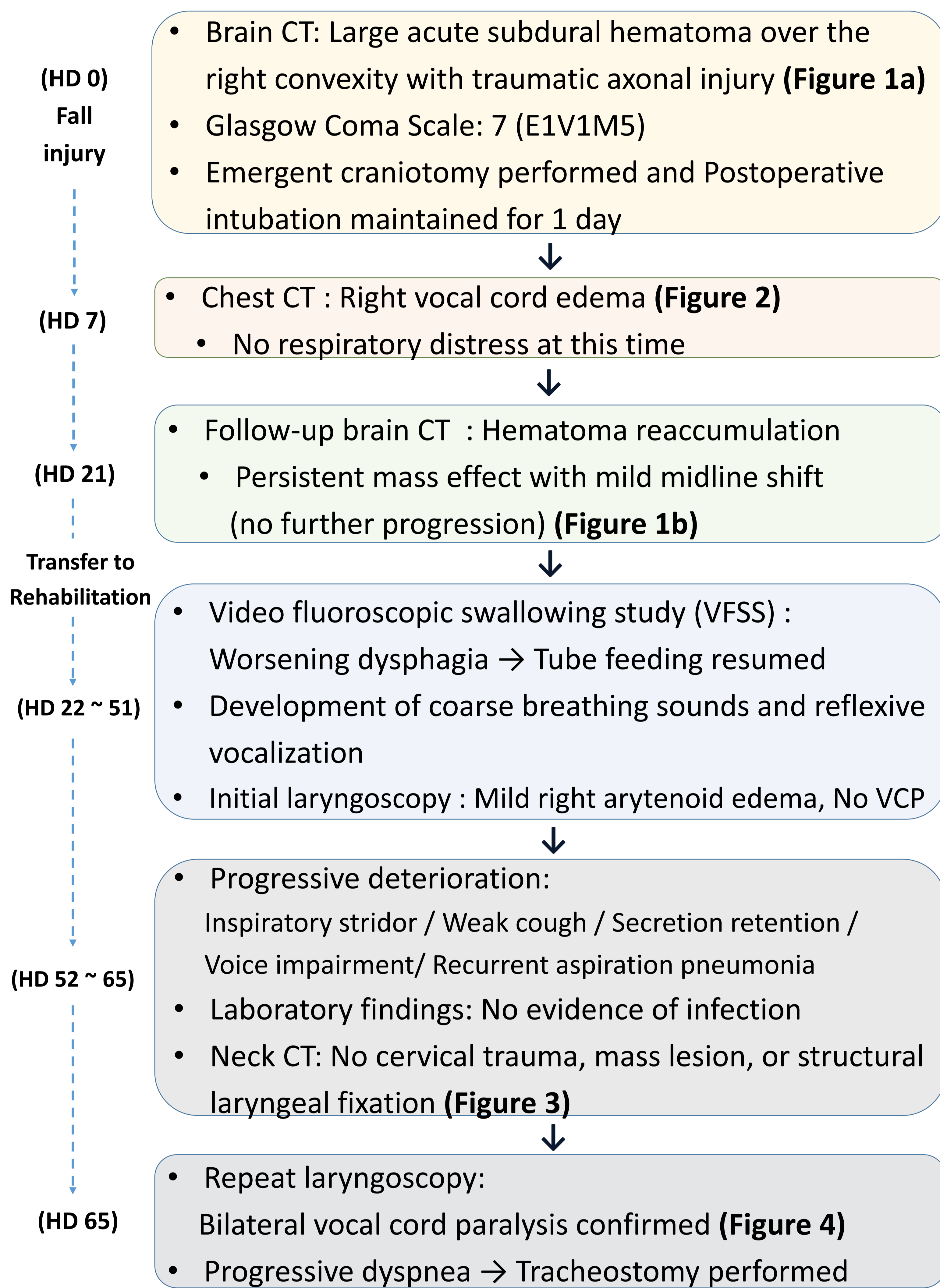


Figure 1. Evolution of Subdural Hematoma

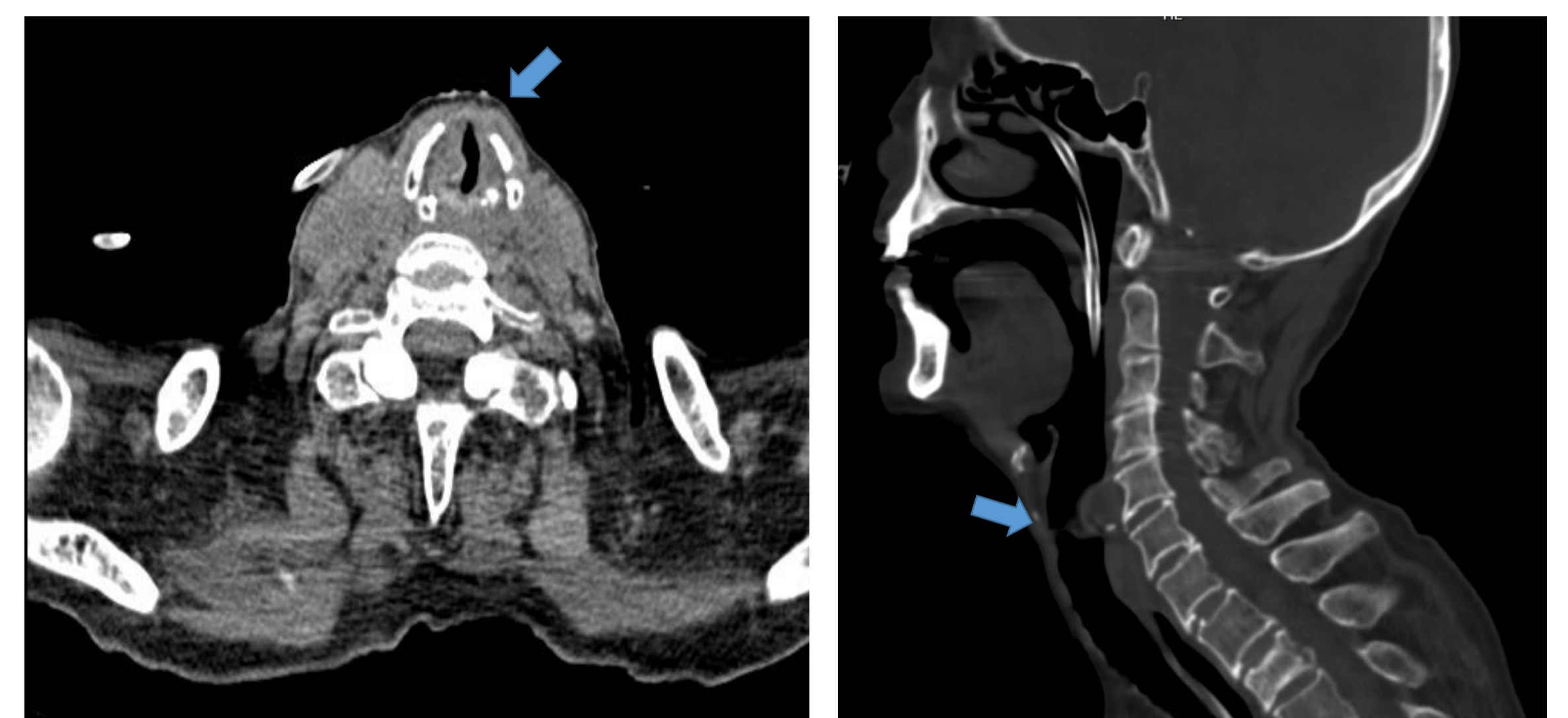


Figure 2. Right Vocal Cord Edema on Chest CT

Figure 3. No Significant Abnormality Around Vocal Cord on Neck CT

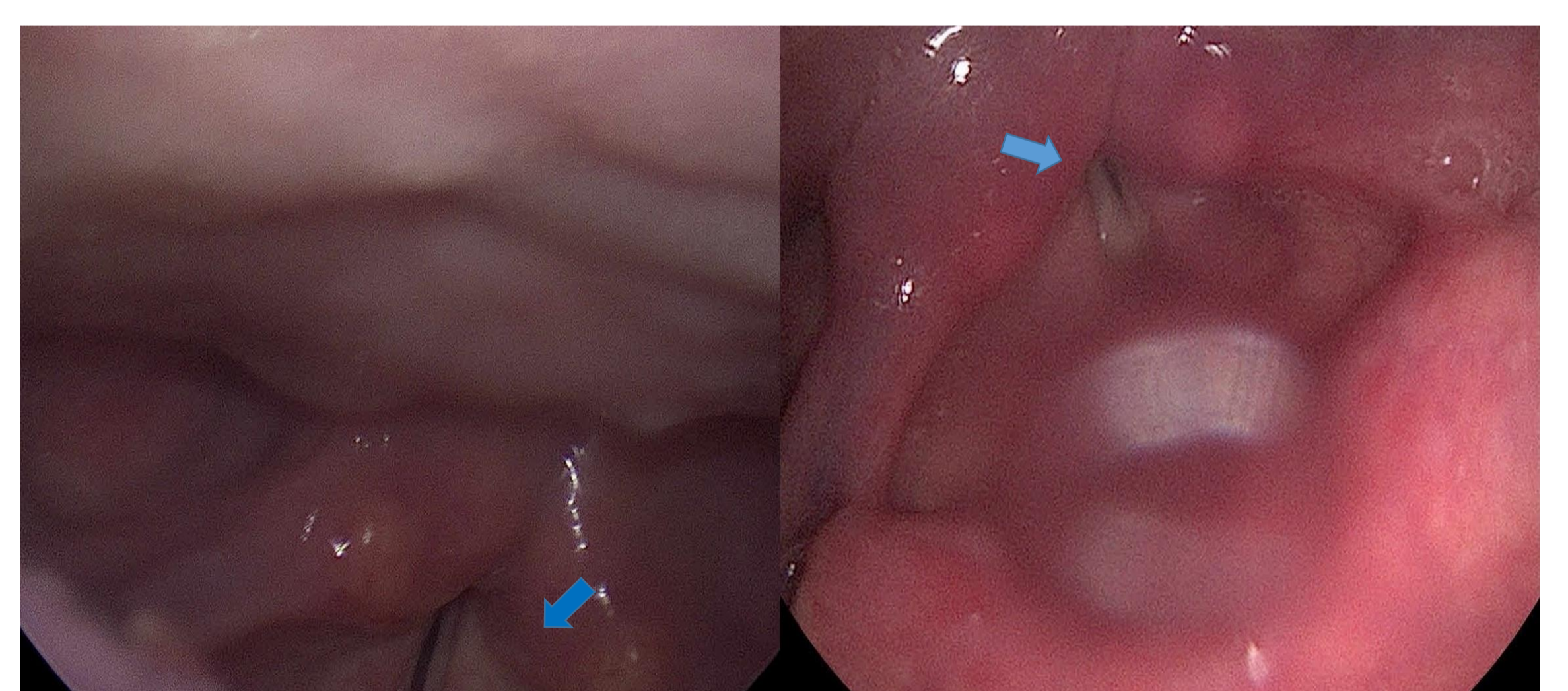


Figure 4. Persistent Bilateral Vocal Cord Paralysis

DISCUSSION

- **Vocal cord movement** is mediated by the vagus nerve and its branch, the recurrent laryngeal nerve, originating from the nucleus ambiguus in the medulla.
- **Severe traumatic SDH with persistent mass effect and midline shift** may indirectly affect brainstem structures or lower cranial nerve pathways.
- Although direct brainstem injury was not radiologically demonstrated, the sustained 3 weeks mass effect, temporal progression of vocal cord dysfunction over subsequent weeks, and exclusion of alternative etiologies **suggest a possible central mechanism.**

CONCLUSIONS

- In patients with severe traumatic SDH accompanied by dysphagia, vocal cord evaluation should be considered.
- Even when initial laryngoscopy does not reveal paralysis, dysfunction may progress over weeks.
- Repeated swallowing and laryngeal assessments are therefore recommended during rehabilitation, particularly when swallowing function deteriorates.

Reference

1. Chen W, Lin Z, Lu K (February 12, 2025) Bilateral Vocal Cord Paralysis Following a Fall: A Rare Case With a Fatal Outcome. Cureus 17(2): e78895. doi:10.7759/cureus.78895
2. Book Salik I, Winters R: Bilateral vocal cord paralysis. StatPearls [Internet]. StatPearls Publishing, Treasure Island, FL; 2024.