

## The silent effects of heart surgery: voice and swallowing

Heart disease is a leading cause of death worldwide. Heart surgeries saves thousands of lives a year but can be lengthy and complex. During surgery, many patients require prolonged periods of intubation and coronary bypass (mechanical support for breathing and blood circulation). It is well known that long periods of intubation have risks, especially to the throat and voice box, as the intubation tube needs to rest between the vocal cords. This study explored the effects of heart surgery on voice and swallowing function. Clinical records of 106 patients (age range 18-87yrs) referred for a swallowing assessment after heart surgery at one large tertiary centre were analysed by a speech-language pathologist and a laryngologist.

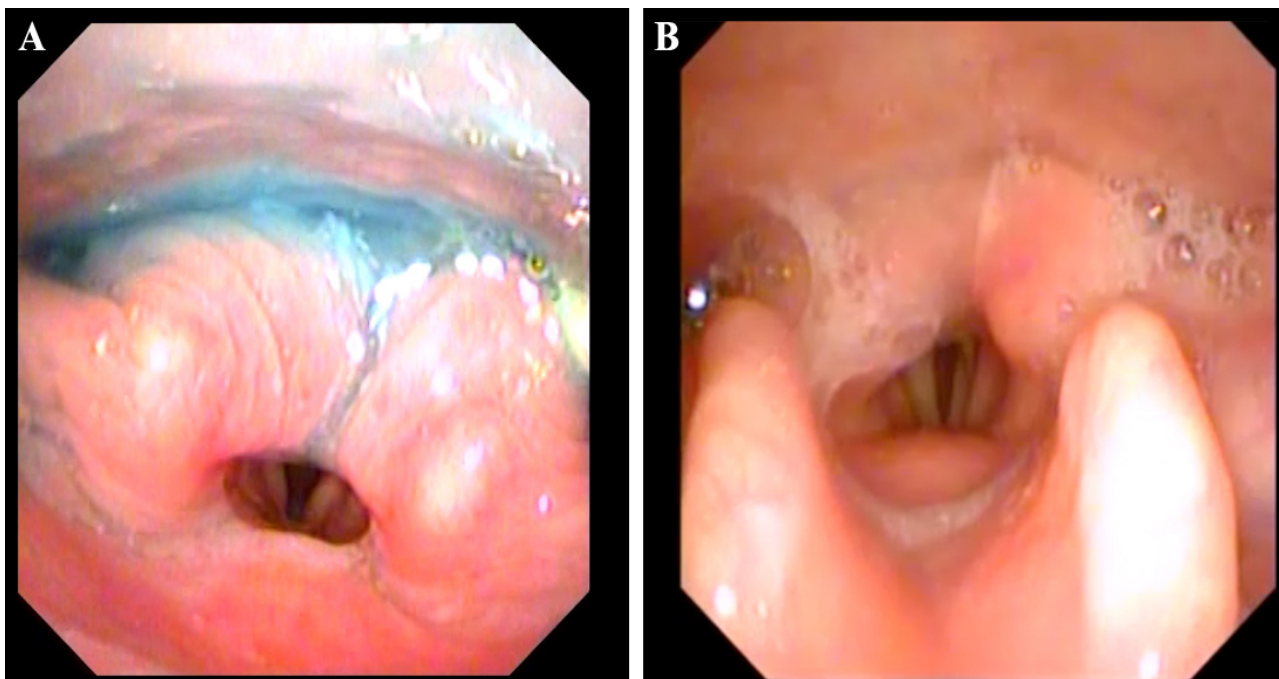


Fig. 1. A. Patient following heart surgery with significant edema and aspiration (blue-tainted water entering the airway). B. Patient following heart surgery with edema and aspiration of saliva (saliva entering the airway).

Voice and swallowing problems were seen in a high number of patients including: 65% swollen vocal cords, 61% vocal cord paralysis and 39% silent aspiration (food or drink entering the lungs with no cough response). A third of patients developed chest infections and 14% had a post-operative stroke. Fortunately for most patients, problems were short-lived. 91% of swollen vocal cords and 65% of partial vocal cord paralysis resolved between day 7-12 post-surgery. By discharge from acute hospital, the majority of patients were eating and drinking normally. However, a small number of patients did not get better spontaneously. 24% of patients still needed a feeding

tube when they transferred to the rehabilitation ward and only 10% of full vocal cord paralysis resolved with 8 patients needing vocal cord surgery within 12 months of discharge from hospital.

Voice and swallowing problems were significantly associated with longer intubation / ventilation time and longer time with a tracheostomy tube. Worse swallowing function was significantly associated with longer hospital stays, longer periods of tube feeding and more chance of getting a chest infection.

Our conclusion was that patients should receive an endoscopy (a view of their throat) after heart surgery to identify voice and swallowing difficulties early. Patients who require the most careful monitoring are those who need longer intubation time due to the complexity of their surgery or need a tracheostomy after surgery. Patients with voice and swallowing difficulties have longer hospital stays, need tube feeding and develop chest infections. For some patients, a temporary vocal cord implant may improve voice and stop aspiration (food /drink entering the lungs). Early assessment allows teams to reduce these secondary complications through careful management of eating and drinking.

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## **Publication**

[Dysphagia and laryngeal pathology in post-surgical cardiothoracic patients.](#)

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