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Tracheal Granulation: An unusual source of airway vibration, allowing phonation in a patient with a tracheostomy

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Abstract

Surgical tracheostomy is a procedure that is widely used in order to achieve an optimal airway in a patient. Usually, the patients are not able to phonate, as all airflow is through the tracheostomy tube and none through the larynx.

We present a case of a patient who developed tracheal stenosis following a prolonged period of intubation and tracheostomy because of COVID 19 and subsequently found to unexpectedly still be able to phonate despite a revision tracheostomy.

A 71 year old man was admitted with confirmed COV-SARS2 requiring prolonged intubation underwent a surgical tracheostomy on 25/05/2020. This remained in situ until 22/04/2020 when he was decannulated. He subsequently developed tracheal stenosis secondary to the tracheostomy, which prolonged his hospital stay. This was managed with focused steroid injections and balloon dilatation to the stenosed area of the trachea. He was discharged on the 19/06/2020 to a rehabilitation center only to return two days later, on 21/06/2020 reporting shortness of breath. The patient was stridulous and was therefore readmitted and the case was referred to a tertiary airway centre for multi-disciplinary consideration of further management. On their advice, a second surgical tracheostomy was performed on 21/07/2020 in order to secure his airway while awaiting an outpatient appointment.

On the ENT ward round on 24/07/2020, it was noticed that despite having the tracheostomy cuff inflated, and a non-fenestrated tracheostomy tube in situ, the patient was able to phonate. Tracheoscopy with a flexible endoscope revealed that the tracheostomy tube had become partially obstructed by granulation tissue arising from the anterior tracheal wall. This was obstructing greater than 75% of the inferior orifice of the tracheostomy tube. We report this rare and unusual case as the granulation tissue appears to have been acting as a vibrating source, allowing the patient to phonate while the cuff was inflated.

Biography:

Nikolaos Spantideas is a trust grade ENT registrar at Northwick Park Hospital. He also holds a degree in Speech and Language Therapy, MSc in Voice Pathology from UCL and a PhD. His main interest is voice physiology and pathology, as well as voice science.

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