opening. However, in our case a trans-orbital tube would have made the surgery difficult. In this case, awake fibre-optic intubation would have been the safest method of airway management.

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Postoperative airway obstruction due to Tapia's syndrome after coronary bypass grafting surgery

10.1017/S0265021506001542

EDITOR:
Tapia's syndrome describes a lesion characterized by paralysis of the 10th and 12th cranial nerves. It was first described in 1905 in toreadors who were injured behind the angle of the mandible by bulls' hooves [1]. We present a rare case of postoperative airway obstruction accompanied by failed extubation attempts due to Tapia's syndrome after coronary artery bypass grafting (CABG) surgery.

A 52-yr-old female was admitted to hospital for CABG. She had a history of coronary artery disease and myocardial infarction 2 yr before. Preoperative physical and laboratory examination were within normal limits, with no signs of neurological abnormalities. Administration of general anaesthesia and orotracheal intubation proceeded without difficulty. Laryngoscopy was performed with a Macintosh blade, and an 8-mm endotracheal tube was inserted successfully on the first attempt. The cuff was inflated with air, up to the point where no audible leak was heard. After midline sternotomy, full heparinization, cold cardioplegia and hypothermic cardiopulmonary bypass, three anastomoses were made.

Postoperatively, the patient was transferred to the intensive care unit and underwent mechanical ventilation. On the first postoperative day, the patient was fully awake and breathing adequately. She was weaned from mechanical ventilation gradually, but soon after extubation, symptoms and signs of upper airway obstruction developed, so she was reintubated. Two further attempts at extubation also failed, the patient having airway obstruction each time extubation was attempted. A tracheostomy had to be performed 5 days later.

Detailed ear, nose and throat and neurological examination revealed bilateral hypoglossal and recurrent laryngeal nerve palsy. The patient was unable to move her tongue, and there was pooling of secretions in the oropharynx. There was no decreased sensation of the tongue and taste was unaltered. Indirect laryngoscopy revealed vocal cord paralysis. A magnetic resonance (MR) scan of the brain, base of the skull and hyoid bones, as well as MR angiography and carotid-basilar artery angiography showed no abnormalities. Serological studies for infections were also negative. Electromyographic examination showed denervation of the tongue along with fibrillation potentials and positive sharp waves.

The nerve palsies improved slowly. One month after surgery, the patient was able to symmetrically extend her tongue, and vocal cord movement started to recover. Sixty-five days after surgery, the patient was able to swallow soft food. Symptoms ultimately resolved completely after 3 months and the tracheostomy was closed. Follow-up examination 2 months later revealed no abnormalities.

Hypoglossal and recurrent laryngeal nerve palsy has been reported as a rare complication during anaesthesia. General anesthesia with oral intubation or regional anaesthesia with interscalene brachial plexus block has been related to bilateral Tapia's syndrome [2,3]. Johnson and Moore [3] showed that sudden onset of hypoglossal and recurrent laryngeal nerve paralysis suggests a vascular event. The same authors suggested that the ascending pharyngeal

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branch of the carotid artery provides exclusive blood supply to cranial nerves X and XII, and thus carotid dissection after minor trauma may lead to sudden cranial nerve X and XII palsies. For this reason, in the present case, MR angiography and carotid triplex scan took place but did not reveal any abnormality. Additionally, Tapia's syndrome can be considered as a localized lesion at the crossing of the recurrent laryngeal and hypoglossal nerves. It has been suggested that pressure neuropathy occurs owing to hyperinflation or malposition of the cuff of the endotracheal tube within the larynx causing compression on both nerves at this crossing point [4]. In the present case, the cuff pressure was low and no nitrous oxide was administered.

Interestingly, Tapia's syndrome has been caused by central nervous system tumours. Kranianski and colleagues have reported an interesting case of hypoglossal and vagus nerve palsy in a patient with metastatic haemangiosarcoma [5]. To exclude a tumour, an MR scan of the brain was performed and did not show any lesion.

In our case, we could find no clear mechanism inducing the bilateral hypoglossal and recurrent laryngeal nerve palsy. Inadvertent hyperextension and lateral flexion of the neck at some point during sternotomy phase, in conjunction with endotracheal tube malposition, might have led to compression at the crossing point of the vagal and hypoglossal nerves, but this is speculation. Another possibility is that originally described by Boiseau and colleagues, where Tapia's syndrome developed after compression by the tracheal tube caused by displacement of the head during shoulder surgery in the sitting position [6].

We believe that this is a rare cause of failed extubation and that it has occurred in cardiovascular anaesthesia for the first time. Extreme care must be taken in the placement of the head during every procedure and in endotracheal tube position as this may result in bilateral hypoglossal and recurrent laryngeal nerve paralysis, which should be considered possible, whenever extubation fails owing to upper airway obstruction.

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Complex regional pain syndrome in all four limbs

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EDITOR:

Few symptoms have been known by more names and have been the subject of more heated discussions than complex regional pain syndrome (CRPS) type I.

A 45-yr-old male developed CRPS type I in all four limbs after having an electric shock in his right hand. To our knowledge, no case has been reported where a patient developed CRPS type I in all four limbs.

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