

Tapia's Syndrome

Tapia's syndrome is an ipsilateral hypoglossal and recurrent laryngeal nerve palsy that causes loss of tongue motor function and an adducted vocal cord. Tapia's syndrome has been attributed to airway manipulation, pressure neuropathy from orotracheal intubation, interscalene nerve block and intraoperative patient positioning [1, 2].

Case Report

- A 25 year old 45kg ASA 1 female underwent a right clavicular plating under general anaesthesia. No nerve block was performed. Her airway was secured with a Mackintosh size 3 blade and size 7.0mm reinforced endotracheal tube. Her head was carefully strapped into the beach chair headrest and slightly rotated to the left to enable surgical access with padding around pressure areas. Surgery lasted ninety minutes and extubation was uneventful. Normal blood pressure was maintained intra-operatively.
- The patient presented one day post operatively with right sided tongue deviation (Figure 1), whispering voice and reduced tongue mobility. She had no dysphagia or respiratory compromise. She was diagnosed with Tapia's Syndrome after a referral to Neurology. Imaging was not warranted given the lack of additional neurological deficit. As her symptoms were improving she was managed conservatively and was followed up by telephone. Her symptoms had fully resolved by three months.



Figure 1: Tongue deviation (photograph with patient permission)

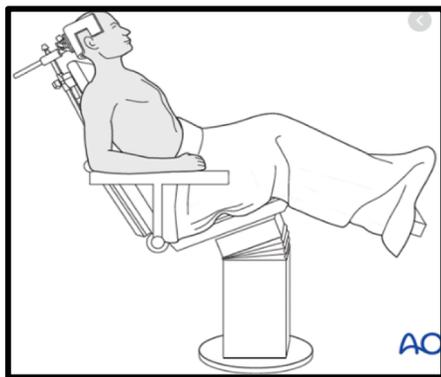


Figure 2: Beach Chair Position [3]

Discussion

Whilst the cause of Tapia's Syndrome cannot be confirmed, it is considered most likely due to positioning given the patient's small body habitus in the Beach Chair position (BCP) and the need to rotate the head to allow surgical access. In the BCP a small positional change can modify the trunk in relation to the headrest and cause hyperextension [1].

The BCP (Figure 2) was described in the early 1980s to address the issue of brachial plexus traction injuries caused by the lateral decubitus position (LDP) [4].

Another possibility is the endotracheal tube exerting pressure at the crossing of the vagal and hypoglossal nerves [1]. A nerve block was not used, excluding regional anaesthesia as a possible cause.

Table 1: Advantages and Complications of the BCP [compiled from 1, 4 & 5]

Advantages of the BCP	Complications of the BCP
Brachial plexus and forearm neuropathies are decreased compared to the LDP.	Neurological complications e.g. stroke, spinal cord ischemia, transient visual loss.
Better intra-articular visualization than LDP.	Hypotension when positioning from supine to BCP.
Maintains anatomic orientation and gives rotational control of the upper extremity.	Limited access to posterior and posterior-inferior aspects of the joint.
Easy conversion of arthroscopic procedure to an open procedure.	Increased risk of cranial nerve palsies.

Learning Points

- Always consider the risks when using the BCP, including risk of venous pooling and associated blood pressure effects.
- Use a team-based approach whilst securing the head and neck in the neutral position to enhance patient safety [5].
- The importance of measuring endotracheal tube cuff pressures is highlighted.
- Consider different sized beach chairs to compliment patient size.
- The role of the multi-disciplinary team in the follow up and management of post operative nerve damage is demonstrated.

References

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