

## **Facial Nerve Paralysis After General Anaesthesia**

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### **SUMMARY :**

A rare case with facial nerve palsy which occurred while the patient was under general anaesthesia is reported and its mechanism is discussed.

The danger of damage to peripheral nerves in the unconscious patient under general anaesthesia by pressure or by stretching has been reported. Cranial nerves paralysis are rare and usually due to surgical procedures.

Our case had facial nerve palsy which occurred under general anaesthesia and it was thought to be result of pressure exerted at the angle of the left jaw due to wrong position of the head against hard support.

### **CASE REPORT**

B.A. 34 year, old woman was operated with a right sided thoracotomy, after induction of sodium pentothal and succinylcholine intravenously, the patient was intubated with endotracheal tube. Ten minutes after the beginning of general anaesthesia patient was positioned to the left side. To fix patient's head, left ramus of the mandible and the left temporal region, a ring shaped cushion was used.

Three and half hours later when the patient recovered consciousness, we noticed that the patient has had left sided peripheral facial palsy involving the left corner of the mouth, and both left upper and lower lips.

On questioning the patient, she claimed that she has numbness on her left cheek.

On carefull examination a weakness of the left lower and upper lips, flaccidity of the cheek, weakness of the left upper eyelid was easily detected.

As soon as we noticed the left sided paralysis of the facial nerve, treatment was immediately started with i.v. steroids, diuretics and with physical treatment.

After two months, recovery was completed and full function had returned.

## ANATOMY OF THE FACIAL NERVE

The facial nerve leaves the skull by the stylomastoid foramen, where it passes forward and outward to become superficial to the ramus of the mandible and enters the substance of the parotid gland. Here it divides into its branches, which proceed forward to supply facial muscles. In some cases the mandibular branch occupies a low position and bends around the edge of the angle of the jaw so that any pressure applied in this area would compress the nerve branch against the bone.

## DISCUSSION

Lawrence and Valantino have reported transient left facial paralysis case after normal vaginal delivery with general anaesthesia, and they stated that the angioneurotic pathogenesis is a favoring possibility of the facial palsy<sup>4</sup>.

A case of facial paralysis has been reported following use of Trichloroethylene general anaesthesia. The responsible factor, thought to be a neurotoxic effect of degradation products which are sometimes produced by soda lime<sup>2, 3</sup>.

Chandra and Khanna presented a facial paralysiss case after transient edema of the parotid gland during anaesthesia<sup>1</sup>.

The porolonged application of tight face fitting straps to hold the mask in place, and exertion a strong pressure at the jaw to relieve pharyngeal respiratory obstruction as the result of the tongue's falling back to the pharynx may interfere with circulation of the nerve and cause o facial palsy<sup>2</sup>.

P.J. Nightingale and A. Longreen assert that the majority of the facial injuries are due to stretching or compressions of nerves which cause focal neural ischemia and, where stertching alone is concerned, the rupture of interneurial capillaries<sup>1, 5</sup>.

In our case the facial nerve palsy was due to false used of hard ring shaped head support during operation and this was considered to be a pressure factor on the facial nerve which have been maintained almost three and half hours.

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