Clinical features of first bite syndrome

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ABSTRACT

Objective: Learn more about first bite syndrome’s (FBS) clinical presentation.

Methods: Prospective observational study of patients, undergoing neck surgery in a tertiary hospital, between Jan 2001 and Dec 2003. There were 5 patients who had FBS post-operatively. These 3 males and 2 females aged 18 to 32 years. The onset, location, character and aggravating/relieving factors for pain were noted along with presence/absence of Horner’s syndrome. They were in-patients for 7 days post-operatively and followed up at 1, 3, 6, 9, 12 and 15 months.

Results: FBS occurred after parapharyngeal schwannoma excision (n=4) and radical neck dissection (n=1). The pain started on 1st (n=2), 4th (n=1), 7th (n=1) and 10th (n=1) post-operative days. Excruciating cramping pain, localized to parotid, lasted 30-60 seconds after first bite and eased off in 3-7 minutes. Routine non-steroidal analgesics were not effective for pain relief. Follow up ranged from 1-15 months (median 12). Pain completely disappeared in 2 patients in 12 to 13 months. Pain of reduced intensity was persistent in two at 12 and 15 months.

Conclusions: The onset of pain within a day after surgery is a feature of FBS, not described earlier in literature and needs further investigation.

INTRODUCTION

First bite syndrome (FBS) is a rare complication of parapharyngeal surgery. This is intense pain occurring in the parotid region at the onset of each meal lasting for few seconds and gradually subsides and disappears when patient continues to eat only return at next meal. No treatment has been effective. This is thought to be the result of loss of sympathetic supply to the parotid gland leading denervation supersensitivity of the myoepithelial cells within the gland. This has also been described as gustatory pain occurring as complication of carotid endarterectomy. Pain was noted within few hours of the procedure unlike that described by Netterville et al. We conducted this prospective observational study to describe the clinical features of FBS.

METHODS AND MATERIALS

Prospective observational study of patients, undergoing neck surgery in a tertiary hospital, between Jan 2001 and Dec 2003. There were 5 patients who had FBS post-operatively. These 3 males and 2 females aged 18 to 32 years. The interval between time of surgery and onset of pain, location, duration, character and aggravating/relieving factors for pain were noted along with presence/absence of Horner’s syndrome. They were in-patients for 7 days post-operatively and followed up in the clinic or by telephonic conversation at 1, 3, 6, 9, 12 and 15 months or till pain resolved.

RESULTS

FBS occurred after parapharyngeal schwannoma excision (n=4) and radical neck dissection (n=1). Three of the schwannomas originated from cervical sympathetic chain and the other from vagus nerve. The pain started on 1st (n=2), 4th (n=1), 7th (n=1) and 10th (n=1) post-operative days. Patients who had onset pain on 1st post-operative day had cervical sympathetic (CSS) and vagal schwannoma. Pain started at first drink at 6 hours in one and at first main meal after 8 hours. Excruсiating cramping pain, localized to parotid mainly pre auricular region, lasted 30-60 seconds after first bite and eased off in 3-7 minutes. Routine non-steroidal analgesics were not effective for pain relief. Horner’s syndrome was also present in all 3 CSS patients. Follow up ranged from 1-15 months (median 12). Pain completely disappeared in 2 patients in 12 to 13 months. Attacks of pain of reduced intensity was persistent in two at 12 and 15 months. Two patients had telephonic follow up while rest attended clinic.

DISCUSSION

Haubrich was the first to describe FBS in relation to dysphagia and considers it as a variant of diffuse oesophageal spasm. Although Netterville et al are credited for describing this entity to the head neck surgeons, it has been reported in literature as post-sympathectomy parotid or gustatory pain occurring following superior cervical ganglionectomy and carotid endarterectomy. Parotid gland sympathetic supply the by superior cervical ganglion through plexus around the external carotid artery. Kawashima et al have shown that FBS was seen more often when external carotid was ligated. The proposed theory of causation of FBS as denervation hypersensitivity leading to spasm of myoepithelial cells is consistent with onset of pain in 2nd week after surgery. But the onset of pain within few hours of sympathetic ablation seen in 2 of our cases and in the patient reported by Traux cannot be explained by the above pathogenesis. There may be another mechanism like vasodilatation within the parotid due imbalance of the autonomic innervation. These findings reported by us warrants further investigation of FBS to understand and manage this entity better.

CONCLUSIONS

The onset of pain within a day after surgery is a feature of FBS, not described earlier in literature and needs further investigation.

REFERENCES