

Expanding Scope of Surgeries under Local Anaesthesia in Maxillofacial Surgery

RS Bedi¹, Navbir Kaur², Nimish Gupta¹, Poonam Goel¹

ABSTRACT

In the expanding scope of Oral and Maxillofacial surgery, surgeons are bound to deal with the patients of elderly age or it is sometimes not advisable to undergo surgical procedure under general anaesthesia due to compromised health status. So in such patients surgeons worldwide are trying to expand the scope of using local anaesthesia for surgeries which are normally performed under general anaesthesia without compromising the safety and comfort of the patient with or without sedation. We present a case in which submandibular gland was successfully excised under local anaesthesia.

Keywords: Submandibular gland, General anaesthesia, Local anaesthesia

recovery, perioperative neuropathy, hypo or hyperthermia, adverse drug effect and hypersensitivity etc.

In view of these issues, many general surgery, plastic surgery, orthopaedic or even neurosurgical procedures are being performed under local anaesthesia with or without sedation during last two decades more frequently. Surgeons are performing many procedures under local anaesthesia which were earlier performed strictly under general anaesthesia. There are references of thyroid gland excision as reported by Kathryn *et al.*¹, posterior cervical spine stabilization under local anaesthesia as reported by Rao. *et al.*² and many other similar procedures. Similarly many maxillofacial cases which are primarily treated under general anaesthesia can be switched comfortably to local anaesthesia. Here we present a case report of submandibular sialadenectomy performed under local anaesthesia.

INTRODUCTION

Maxillofacial surgery deals with vast variety of diseases, lesions and deformities in patients of almost all age groups. There is a good deal of choice of anaesthesia options available for performing the surgery. Many a times performing surgeries under general anaesthesia is not feasible as the age, medical/dental health of the patient, financial or social factors act as a restraint. Furthermore, general anaesthesia itself is associated with many other complications like— post G. A hypoventilation, respiratory difficulty, obstruction, hypoxia, hyper or hypocapnia, hyper or hypotension, arrhythmias, delayed

CASEREPORT

A 23 years old female, reported to us with chief complaint of swelling in right lower third of face and facial asymmetry since last eighteen months. There was history of mild increase in swelling and pain associated with meals. There was no history of associated fever, pain, tenderness, restricted mouth opening or difficult deglutition. On thorough clinical examination swelling of approximately 5 x 4cm in the submandibular region of right side. A firm swelling with definite margins was palpable. It was nontender and was not associated with any surface changes. This submandibular swelling was palpable bimaually on right side. Intraorally no salivary flow or discharge was noted in relation to opening of right wharton's duct. Patient reported increase in the size of swelling and discomfort during and immediately after meals in the past. All routine investigations were found within normal limits. Fine needle aspiration cytology (FNAC) revealed chronic inflammatory sialadenitis of right submandibular salivary gland.

Based on above clinical and histopathological findings patient was planned for excision of right submandibular gland. Patient was given option for the procedure to be performed under general anaesthesia but patient strictly declined the same due to some religious boundations. Hence, the patient was planned for the procedure under local anaesthesia under

¹Department of Oral & Maxillofacial Surgery, Saraswati Dental College, Lucknow, ²Department of Anatomy, MMIMSR, Mulana, Haryana, India

Address for Correspondence:

Dr. R.S Bedi

Saraswati Dental College & Hospital, 233 Tiwari Ganj,

Faizabad Road, Off Chinhat, Lucknow-227105 (UP), India

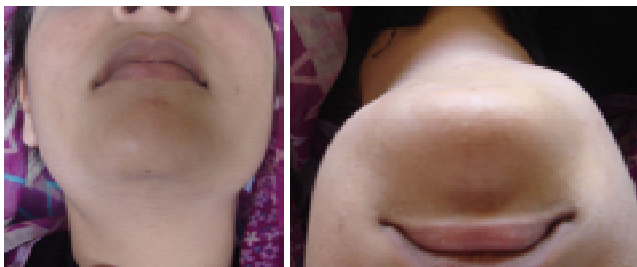
Contact No: +917897063939 Email: kingbedi99@gmail.com

Date of Submission : 20-01-2011

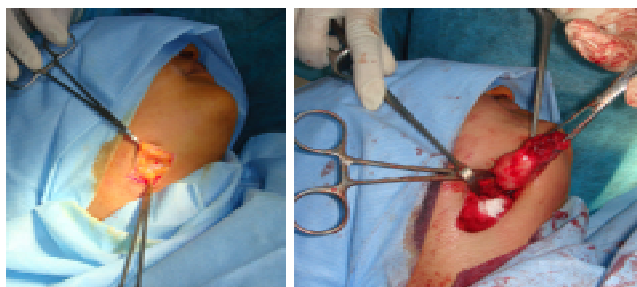
Review Completed : 01-02-2011

Date of Acceptance : 05-02-2011

PATIENT PHOTOGRAPHS



Preoperative photographs showing swelling in right lower third of face and facial asymmetry.



Intraoperative photographs – showing excision of gland under local anaesthesia



Excised Submandibular gland

Fixation of Drain

antibiotic coverage. Lignocaine hydrochloride 2% solution with 1:100000 adrenaline was used to block inferior alveolar, lingual and long buccal nerves. Along with that cervical plexus block and local infiltration was given at the site of proposed incision.³ Procedure was performed by extraoral risdon's approach with the incision placed in skin crease about 2cm below the lower border of mandible. Surgical excision of gland was done by following the standard procedure and wound was closed in layers by vicryl 3-0 and prolene 4-0. Patient was monitored for 4 hours postoperatively and was discharged from surgeons care subsequently. Sutures were removed after 5th post operative day. Healing was uneventful.

Patient was kept on follow up period for one year. There were no functional problems noted and there were no signs of nerve injury or weakness of muscle of facial expressions.

DISCUSSION

Keeping in view the wide arena and expanding scope of oral and maxillofacial surgery, surgeons are bound to deal with the patients of elderly age or the patients who are medically compromised and it is sometimes not advisable to undergo surgical procedure under general anaesthesia. In our practice also we have come across many patients who are not financially able to bear the higher cost of hospitalization and general anaesthetic procedure. So in such patients surgeries can be performed without compromising the safety and comfort of the patient under local anaesthesia with or without sedation. As per Chukwuneke,⁴ local anaesthesia is an effective alternative to difficult and sometime expensive general anaesthetic methods used in developed countries and could be emulated by oral and maxillofacial surgeons in developing countries.

One of the drawbacks in performing surgeries in awake patients under local anaesthesia is pain and discomfort which can be easily overcome by proper and judicious use of local anaesthesia with or without sedation. As per Tam-Lin Chow et al Submandibular sialoadenectomy under local anaesthesia is feasible⁵. It can shorten the hospital stay thereby reducing the cost of procedure significantly and save the patient from general anaesthesia complications. Many other maxillofacial procedures can also be planned under local anaesthesia provided patient evaluation and counselling is done carefully. By use of proper local anaesthesia technique adequate pain control, can be achieved and patient co-operation can be ensured as patient is awake. This also saves the patient from undue stress of general anaesthesia.

CONCLUSION

Many Oral and Maxillofacial surgical procedures can be performed as day care surgery safely with judicious use of local anaesthesia provided patient evaluation and counseling is done carefully.

REFERENCES

1. Spanknebel K et al. Thyroidectomy Using Local Anesthesia: A Report of 1,025 Cases over 16 Years. *Journal of the American College of Surgeons* 2005;201:375-385.
2. Rao *et al.* Posterior cervical spine stabilization under local anaesthesia. *Journal of Spinal Disorders* 1990;3(3): 250-254.
3. Moshe Shteif et al. Use of cervical plexus block in drainage of submandibular, submental abscess – an alternate for general anaesthesia. *J Oral Maxillofac Surg* 2008; 66: 2642-2645.
4. Chukwuneke FN et al. Surgical excision of intra-oral dermoid cyst under local anaesthesia: a review of 9 cases: *J Maxillofac & Oral Surg* 2010; 9: 19-21.
5. Tam-Lin Chow et al. Submandibular sialoadenectomy with local anaesthesia in the era of minimally invasive surgery. *Otolaryngol Head Neck Surg* 2008; 138: 752-755.