

# Common Postoperative Complications Following General Anesthesia in Oral and Maxillofacial Surgery: A Cross-sectional Study

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## Abstract

**Background:** The rationales of current research assessed postoperative complications in subjects undergo maxillofacial surgery underneath general anesthesia plus decide the shelter of general anesthesia with co morbidities. **Subjects and Methods:** Current research includes 250 subjects who were operated underneath general anesthesia. Different parameters such as age, gender, laboratory and radiographic parameters, preoperative intraoperative, and postoperative were documented. Post-operative problems were evidenced and separated: 1. Complications unswervingly connected to surgical process 2. Complications connected to general anesthesia. **Results:** There were 140 males and 110 were females. About 79% of subjects demonstrate sore throat, nausea in 68%, vomiting in 43%, headache in 31%, hypertension in 19%, hypotension in 30%, myalgias in 22%, bleeding in 3%, sleep trouble with connected behavioral troubles in 33% plus wound infection in 12%. **Conclusion:** Majority of post-operative impediments was minor and convenient, though several complications are most important and these can be slanted to fundamental systemic condition. General anesthesia is a secure method of guarantee wellbeing and reassure through surgery but still, there can be complications that have to be documented.

**Keywords:** Comorbidities, Dysphagia, Nausea, Postoperative Complications

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## Introduction

The surgical extraction of lower third molars is widespread interference in oral surgery.<sup>[1]</sup> It is often connected via extensive postoperative complications which have biological and social force.<sup>[2,3]</sup> General anesthesia is generally secure and persons with noteworthy health circumstances too may experience events under general, but it can have innumerable negligible and foremost complications.<sup>[4]</sup>

The head and neck region of the body enclose numerous significant configurations dense into a comparatively little region. These configurations encompass of bones, neurovascular structures, dissimilar glands, eyes, nose and numerous not to overlook the skin.<sup>[5,6]</sup> The relationship among extended morbidity is tough to unravel since period of surgery is frequently comparative to the difficulty of process. Numerous studies consider extending surgery bear an elevated than predictable impediment rate, though proof to this is missing while frequently lengthy operations are composite and difficulty by numerous supplementary variables disturbing subjects' conclusion.<sup>[7,8]</sup> Extremely not

many researches are accounted in text concerning frequent postoperative impediments in maxillofacial surgery subjects following general anesthesia in robust and unhealthy subject.

## Subjects and Methods

Present research was performed at Department of maxillofacial and oral surgery sustained by pre- devised questionnaire following agreement from the Institute. Current research encompass of 250 subjects operated under general anesthesia. Different variables such as age, sex, laboratory and radiographic factors were documented. Postoperative problems were documented and alienated: 1. Complications unswervingly connected to surgical process 2. Complications connected to general anesthesia. The questionnaire incorporated investigation concerning history of medical troubles, bleeding, dysphagia, nausea, swelling, pain, complexity in sleep, incapability to do substantial action, hypotension, fever, some respiratory troubles, crammed preoperatively and following surgical procedure to

12 weeks.

### Statistical analysis

The recorded data was evaluated utilizing SPSS version 15. For all tests, confidence level and level of significance were set at 95% and 5% respectively.

## Results

(ASA1) 56.8% were fit subjects with no systemic illness, (ASA11) 1.2% ASA11 had mild systemic illness (ASA 111) individual through strict. About 42% had CVS, respiratory illness, diabetes etc. 140 was males and 110 were females [Table 1].

Time period diverse since one to 3 hours and in excess of 3 hours. Regarding 51.2% of subjects were operated in 60–120 min, 33.46% were operated in 120–180 hour and 15.2% further 3 hour [Table 1]. 16% of subjects were hypertensive, 21% diabetics, 51% were equally diabetic and hypertensive, and 34% of subjects were each alcoholic or smokers [Table 2]

About 79% of subjects demonstrated sore throat and dysphagia, vomiting in 43%, headache in 31%, fever in 21% and wound disease in 12% [Table 3]. Sleep trouble, hypotension, sore throat, and dysphagia were established owing to equally GA and surgery while respiratory complexity micturition troubles, hypertension, and nausea were owing to general anesthesia.

**Table 1: Demographic characteristics of Study participants**

Variable	Number (Percentage)
<b>Gender</b>	
Male	140 (56)
Female	110 (44)
<b>ASA Status</b>	
ASA I	142 (56.8)
ASA II	3 (1.2)
ASA III	105 (42)
<b>Procedures done</b>	
Trauma	120 (48)
Maxillofacial pathologies	77 (30.8)
TMJ surgeries	25 (10)
Resection and reconstruction	16 (6.4)
Others	12 (4.8)
<b>Duration of surgery</b>	
60-120 min	128 (51.2)
120-180 min	84 (33.6)
>3 h	38 (15.2)

**Table 2: Postoperative complications among Study Participants**

Complication	Percentage
Sore throat and dysphagia	79
Vomiting	43
Nausea	68
Pain and swelling	52
Moderate	48
Severe	7
Headache	31
Fever	21
Hypertension	19
Hypotension	30
Myalgia	22
Bleeding	3
Trauma to teeth and other oral structures	3
Respiratory difficulty	2

Micturition problems	3
Cardiovascular problems	0
Behavioural problems sleep disturbance and nightmares	33
Paraesthesia	8
Wound infection	12

## Discussion

Surgical measures in Oral and Maxillofacial area may both be conceded underneath local anesthesia or general anesthesia. Numerous things add to postoperative morbidity and extent of hospital reside difficulty.<sup>[1]</sup>

Postoperative difficulty in OMFS subjects in the current research underneath general anesthesia was sickness and nausea. A propos 43% subjects comparable to findings with Silva et al.<sup>[10]</sup> Present research observed the occurrence of vomiting and nausea extra in females, similar accounted by Chye et al.<sup>[11]</sup> A research in rats recommended that nitrous oxide causes inspiration of the medullary periventricular dopaminergic system, comprised the CTZ, and this might be accountable for the nausea and vomiting experimental following nitrous oxide anaesthesia in humans.<sup>[12]</sup>

Postsurgical ache and inflammation changeable as of mild to moderate 48% and moderate to severe in 7% was widespread grievance by subject observed as of day 1 to 5, slowly concentrated to a great extent superior than the various studies.<sup>[13,14,15]</sup>

The females accounted additional myalgia, headache behavioral symptoms than males. It might be owing to detail that women articulate their uneasiness additional communally than males who be inclined to conceal their approach. Previous researches have accounted insignificant postoperative complications in difference to the current research which demonstrates mild to moderate bleeding in merely 3%, and wound infection in 12% and postoperatively following chief surgical procedures.<sup>[16]</sup>

Postoperative hypotension may happen owing to a diversity of issues like abridged cardiac output, plus vasodilatation abridged myocardial contractility etc,<sup>[17,18]</sup> Intra-operative blood trouncing being further understandable could be take care of through surgical procedure but postoperative blood beating might set off ignored.

## Conclusion

Majority of post-operative complications are slight as well as convenient, though a few problems are chief and slanted to fundamental systemic form. Incidence of this impediment not only augments period of reside in the hospital, for this reason rising charge of management, but too can influence the subject psychosocially.

## References

1. Shepherd JP, Brickley M. Surgical removal of third molars. *BMJ*. 1994;309(6955):620-1. doi: 10.1136/bmj.309.6955.620.
2. Mercier P, Precious D. Risks and benefits of removal of impacted third molars. A critical review of the literature. *Int J Oral Maxillofac Surg*. 1992;21(1):17-27. doi: 10.1016/s0901-5027(05)80447-3.
3. Shepherd J, Jones GM. Trends in oral surgery practice. *Br Dent J*. 1987;163(7):237-40. doi: 10.1038/sj.bdj.4806258.

4. Kehlet H, Dahl JB. Anaesthesia, surgery, and challenges in postoperative recovery. *Lancet*. 2003;362(9399):1921-8. doi: 10.1016/S0140-6736(03)14966-5.
5. Parikh SS, Chung F. Postoperative delirium in the elderly. *Anesth Analg*. 1995;80(6):1223-32. doi: 10.1097/00000539-199506000-00027.
6. Tabrizi R, Eftekharian HR, Langner NJ, Ozkan BT. Comparison of the effect of 2 hypotensive anesthetic techniques on early recovery complications after orthognathic surgery. *J Craniofac Surg*. 2012;23(3):e203-5. doi: 10.1097/SCS.0b013e31824de3d3.
7. Scott CF Jr. Length of operation and morbidity: is there a relationships? *Plast Reconstr Surg*. 1982;69(6):1017-21. doi: 10.1097/00006534-198206000-00024.
8. Galland RB. Mortality following elective infrarenal aortic reconstruction: a Joint Vascular Research Group study. *Br J Surg*. 1998;85(5):633-6. doi: 10.1046/j.1365-2168.1998.00683.x.
9. Cohen JD, Singer P, Grunberg G, Grozovski E, Sulkes J, Zelikovski A. Outcome after elective infrarenal aortic aneurysm surgery. *World J Surg*. 1998;22(3):278-82. doi: 10.1007/s002689900382.
10. Silva AC, O'Ryan F, Poor DB. Postoperative nausea and vomiting (PONV) after orthognathic surgery: a retrospective study and literature review. *J Oral Maxillofac Surg*. 2006;64(9):1385-97. doi: 10.1016/j.joms.2006.05.024.
11. Chye EP, Young IG, Osborne GA, Rudkin GE. Outcomes after same-day oral surgery: a review of 1,180 cases at a major teaching hospital. *J Oral Maxillofac Surg*. 1993;51(8):846-9. doi: 10.1016/s0278-2391(10)80100-4.
12. Ku CM, Ong BC. Postoperative nausea and vomiting: a review of current literature. *Singapore Med J*. 2003;44(7):366-74.
13. Fung DE, Cooper DJ, Barnard KM, Smith PB. Pain reported by children after dental extractions under general anaesthesia: a pilot study. *Int J Paediatr Dent*. 1993;3(1):23-8. doi: 10.1111/j.1365-263x.1993.tb00043.x.
14. Coulthard P, Rolfe S, Mackie IC, Gazal G, Morton M, Jackson-Leech D. Intraoperative local anaesthesia for paediatric postoperative oral surgery pain--a randomized controlled trial. *Int J Oral Maxillofac Surg*. 2006;35(12):1114-9. doi: 10.1016/j.ijom.2006.07.007.
15. Myles PS, Hunt JO, Moloney JT. Postoperative 'minor' complications. Comparison between men and women. *Anaesthesia*. 1997;52(4):300-6. doi: 10.1111/j.1365-2044.1997.89-az0091.x.
16. Al-Bahlani S, Sherriff A, Crawford PJ. Tooth extraction, bleeding and pain control. *J R Coll Surg Edinb*. 2001;46(5):261-4.
17. Harris M, Chung F. Complications of general anesthesia. *Clin Plast Surg*. 2013;40(4):503-13. doi: 10.1016/j.cps.2013.07.001.
18. Lone PA, Wani NA, Ain QU, Heer A, Devi R, Mahajan S. Common postoperative complications after general anesthesia in oral and maxillofacial surgery. *Natl J Maxillofac Surg*. 2021;12(2):206-210. doi:10.4103/njms.NJMS\_66\_20.

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