

Wisdom Tooth Removal: Are we following any Guidelines in Pakistan

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ABSTRACT

Objective: The surgical removal of third molar/wisdom teeth remains the frequently performed surgical procedure at most Oral and Maxillofacial units. The objective of the study was to assess the level of understanding among general dental practitioners regarding third molar/wisdom tooth, its indication for removal and complication.

Study Design: Cross-Sectional study.

Place and Duration of Study: This study was conducted at the Department of Oral & Maxillofacial Surgery LUM&HS, Jamhsoro from February to April 2013.

Materials and Methods: A self administered questionnaire comprising of 12 questions was distributed among the 50 general dental practitioners of Hyderabad city.

Results: The results of the study shows that level of understanding among general dental practitioners regarding wisdom tooth and its complication was not up to the level expected and majority thinks a guideline is necessary to remove the wisdom tooth.

Conclusion: Our outcome and emphasis would be that PMDC should introduce a guideline and those dentist involved in surgical dentistry should be asked to attend short courses to improve their level of understanding regarding wisdom teeth removal and how to avoid its complications.

Key Words: Wisdom Tooth, Lingual Nerve, Inferior Alveolar Nerve

INTRODUCTION

Surgical removal of wisdom teeth/third molar is one of the most frequently performed procedure performed by an oral and maxillofacial surgeon^{1,2}. Impaction is defined as the failure of a tooth to erupt within expected time due to obstruction by bone or adjacent tooth (teeth), overlying soft tissue, and lack of space which may occur due to tooth-jaw size discrepancy. Impaction most commonly occurs in third molars, more in mandibular than maxillary third molars followed by maxillary canines^{3,4}.

Wisdom tooth removal is usually associated with post operative complications^{5,6,7}. Pain, swelling and trismus are the most common complications, followed by sensory nerve damage, dry socket, infection and hemorrhage. Less common complications are severe trismus, iatrogenic damage to adjacent second molar and iatrogenic mandibular fracture^{8,9,10}.

Mandibular third molars are the most frequently impacted teeth^{11,12}. 92% of the extractions are carried out without any serious complications¹³. Among the most serious and often discussed post operative complication that arises from 3rd molar surgery is trigeminal nerve injury, specifically involvement of either the inferior alveolar nerve or lingual nerve¹⁴. Injury or damage to the lingual, inferior alveolar and sensory branch of the mylohyoid nerves caused by the surgical removal of mandibular third molars is an

occasional but unpleasant tricky situation. Damage to these nerves is a common cause of litigation and is on the increase^{15,16}. The decision to remove a wisdom tooth may often not be an easy and straightforward one. Oral surgeon must consider the risks and benefits associated with the surgical removal of wisdom tooth. It, thus becomes necessary to be aware of the specific indications wherein the removal of a lower third molar is justifiable¹⁷.

MATERIALS AND METHODS

The level of understanding among general dental practitioners regarding wisdom tooth removal was assessed by means of a questionnaire. A validated questionnaire comprising of seven questions were designed relating to common cause of removal of wisdom tooth, awareness of complication like numbness of lip and tongue and any guideline they follow while removing wisdom tooth. The survey was conducted among general dental practitioners of Hyderabad city. A total of 50 questionnaires were distributed among the general dental practitioners of Hyderabad city during their routine practice timings. The study was conducted from February 2013 to April 2013. Of the 50 questionnaires distributed, all the 50 were successfully completed and returned.

The data was compiled and analyzed using SPSS version 17.

RESULTS

50 general dental practitioners both male and female of Hyderabad city participated in this study. Details of the result can be seen in figure 1 and Table 1.

Table No. 1: Questionnaire & the responses made by the participants.

Questions	Yes	No
1. According to you what is the most common cause of removal of wisdom tooth?		
• Caries	15	
• Pericoronitis	07	
➤ Single episode	16	
➤ Recurrent		
• Periodontitis		
• Orthodontic reason		
• Associated with pathology	05	
• Tooth in fracture line		
• Tooth fracture		
• Prosthodontic reason		
• Socioeconomic reason	02	
• Recurrent infection	05	
• Others		
2. Which type of wisdom tooth you feel comfortable to remove?		
• Mandibular mesioangular	28	
• Mandibular vertical	02	
• Mandibular distoangular	01	
• Mandibular horizontal	09	
• Maxillary mesioangular	00	
• Maxillary vertical	04	
• Maxillary distoangular	06	
• Maxillary horizontal	00	
3. Do you think removal of wisdom tooth is the job of specialist oral surgeon only considering the risk involved especially numbness of lip, chin and tongue?	34	16
4. Are you aware of risk of numbness of lip and tongue?	24	26
5. Do you know the course of lingual nerve in relation to crown of the lower wisdom tooth:	21	29
6. Do you follow any guideline while removing wisdom tooth?	07	43
7. Do you think a guidelines is needed in Pakistan to remove the wisdom tooth and risk associated with it:	48	02

DISCUSSION

This proforma based question study reports amongst dental surgeon regarding surgical removal of impacted tooth in Hyderabad. 50 dental surgeons, 43 were

male and 7 were females. The percentage of 87% male and female 13% participated in this study.

Male to Female Ratio of Participants

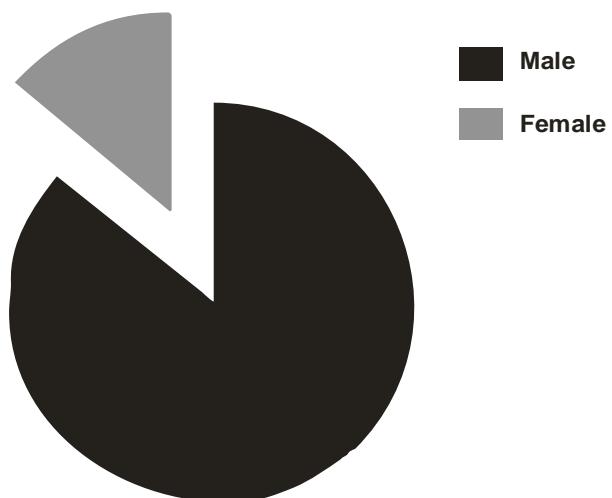


Figure No.1: Number of Male & Female Participants. Out of 50, there were 43 male participants and 07 female participants.

It is quite understandable that anatomical knowledge and surgical skilled of impacted tooth removal in dental surgeon could help towards early healing of socket which in turn decreased intra and post operative complication. Clearly lack of surgical skilled and anatomical knowledge could delay the surgical removal of tooth which adversely delay healing and increase chances of complication..

Study was conducted among Dental surgeon with a view to assess their level of understanding and surgical complication associated with wisdom teeth removal and try to establish if there is any guideline followed.

Nice guideline is followed in U.K. in relation to surgical removal of wisdom teeth and risk involved which mainly is anesthesia or paresthesia of lower lip and tongue, which could be temporary or permanent the other more common post operation complications are pain, swelling, infection and bleeding.

Our result shows that little understanding noticed in General dental practitioner especially when it comes to removal of wisdom teeth which like any other surgery is not risk free.

The results clearly indicate that although the overall surgical removal impacted tooth was satisfactory but application of the anatomical knowledge was not up to the expected standard.

In reply to our first question regarding most common cause of wisdom tooth removal was recurrent pericoronitis 16 (32%) dental surgeon answered that it. While other were caries 15 (31%) once pericoronitis 7 (14%)

Answering the 2nd question which impacted tooth was comfortably remove mesioangular, 32(67%) dental surgeon wrote that mesioangular impaction easy to

extract out surgically. In this reply our finding was similar to international and regional study.

International study by Sisk AL in U.K 1986 and regional study was carried out by Ayaz H in Pakistan in 2012^{7,9}.

Answering the third question Do you think removal of wisdom tooth is the job of specialist oral surgeon only considering the risk involved especially numbness of lip, chin and tongue, 34 (68%) dental practitioner replied positive which was specialist job. Other studies carried out Jaries W Swanson AE. It which is also supported by different studies has published regionally and internationally^{14,16}.

One of the question in this study was Are you aware of risk of numbness of lip and tongue 22 (43%) Dental surgeon answered yes to the question, same study were carried out by Ayaz H in Pakistan 2012 where he worked on over all complication of wisdom tooth.^{7,20} Another question in this study was Do you know the course of lingual nerve in relation to crown of the lower wisdom tooth:

21 (42%) Dental surgeons have had positive response. Similar study were carried out Sheikh in Pakistan 2009^{12,20,21} Do you follow and guideline while removing wisdom tooth. in our survey 7 (14%) dental surgeons have understanding that these are guideline for removal of impacted tooth. similar study was carried out by Ahmed in Pakistan 2009 about post operative complication 2009.^{19,21,22}

The last question was in this survey, do you think a guideline is needed in Pakistan to remove the wisdom tooth and risk associated with it:

.in our study 40 (%) dentist wrote that they guideline would be needed in Pakistan.

CONCLUSION

Our outcome and emphasis would be that PMDC should introduce a guideline and those dentist involved in surgical dentistry should be asked to attend short courses to improve their level of understanding regarding wisdom teeth removal and how to avoid its complications.

REFERENCES

1. Brabander EC, Cattaneo G. The effect of surgical drain together with a secondary closure technique on postoperative trismus, swelling and pain after mandibular third molar surgery. *Int J Oral Maxillofac Surg* 1998;17:119–21.
2. Soodan KS, Kshirsagar R, Priyadarshni P. Comparative study of the effect of tube drain on impacted mandibular third molar surgery. *J Stomat Occ Med* DOI 10.1007/s12548-013-0080-0
3. Khawaja NA. Third molar impaction: A review. *J Pak Dent Assoc* 2006;15(2):97-101.
4. Kashif M, Ayub T, Qureshi NR. Preoperative accuracy of dental panoramic tomography (dpt) in determining the root curvature of mandibular third molar tooth. *J Pak Dent Assoc* 2012;21(4): 235-241.
5. Thomas D, Walker R, Smith A, Shepherd J. The provision of oral surgery services in England and Wales 1984–1991. *Dent J* 1994; 176: 215-19.
6. Seymour RA, Kelly PJ, Hawkesford JE. The efficacy of ketoprofen and paracetamol (acetaminophen) in post-operative pain after third molar surgery. *J Clin Pharmacol* 1996; 41:581-85.
7. Ayaz H, Rehman A. Post operative complications associated with impacted mandibular third molar removal. *Pak Oral Dent J* 2012;32(3):389-392.
8. Woldenberg Y, Gatot I, Bodner L. Iatrogenic mandibular fracture associated with third molar removal. Can it be prevented?. *Med Oral Patol Oral Cir Bucal* 2007;12: 70-2.
9. Sisk AL, Hammer WB, Shelton DW, Joy ED. Complications following removal of impacted third molars: the role of the experience of the surgeon. *J Oral Maxillofac Surg* 1986; 44: 855-59.
10. Muneem A, Qaiuoom Z. effect of Dexamet hasone. Ibuprofen combination on post operative sequallea of thir molar surgery. *Pak Oral & Dental* 2004; 24(1): 23-26.
11. Dachi SF, Howell FV. A survey of 3,874 routine full-mouth radiographs. II. A study of impacted teeth. *Oral Surg* 1961;14:1165–1169.
12. Sheikh A, Khair A, Kiyani A. Lingual, inferior alveolar and mylohyoid nerves sensory impairment following removal of mandibular third molars. *Pak Oral & Dent J* 2009; 29(2): 187-192.
13. Bui HC, Seldin EB, Dodson TB. Types, frequenceies and risk factors for complications after third molar extractions. *J Maxillofac Surg* 2003; 61:1379-89
14. Jaries W, Swinson B, Moles DR, et al. Permanent sensory nerve impairment following 3rd molar surgery: a prospective study. *Oral surgery, Oral medicine, Oral pathology, Oral radiol & Endodontol* 2006;102:1-7.
15. Schwartz LJ. Lingual anaesthesia following mandibular odontectomy. *J Oral Surg* 1973;31: 918-20.
16. Swanson AE. Removing the mandibular third molar: Neurosensory deficits and consequent litigation. *J* 1989; 55: 383-87.

17. Krishnan B, Mohammad Hossni El, Orafi H. Indications for removal of impacted mandibular third molars: a single institutional experience in Libya. *J Maxillofac Oral Surg* 8(3):246–248
18. 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: 17-27.
19. Ahmed A, Mohamed F, Hattab K. Surgical extraction of impacted mandibular third molars: Post operative complications and their risk factors. *JMJ* 2009; 9(4): 272-75.
20. Gbotolorun OM, Olojede AC, Arobita GT, Ladeinde AL, Akinwande JA, Bambose BO. Impacted mandibular third molars: presentation and postoperative complications at the Lagos University Teaching Hospital. *Nig Q J Hosp Med* 2007; 17: 26-29.
21. Milani Contar CM, Oliveira P, Kanegusuku K, Silva BR, Azevedo-Alanis LR, Naval- Machado MA. Complications in third molar removal: a retrospective study of 588 patients. *Med Oral Patol Oral Cir Buccal* 2010;15:74-78.
22. Hupp JR, Ellis III E, Tucker MR. *Contemporary oral and maxillofacial surgery*, 5th ed. St Louis, Missouri: Mosby Elsevier;2008.p.153-78.

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