



EXTRACTION OF THIRD MOLAR OF AN ELDERLY PATIENT, A CASE REPORT

Ricardo Bahram Taheri¹, Carmen López Carriches*² and M. Isabel Leco Berrocal³

¹Fifth-Year Student at School of Dentistry, Universidad Complutense of Madrid, Spain.

²Associate Professor, Department of Dental Clinical Specialties, School of Dentistry, Universidad Complutense of Madrid, Spain.

³Assistant Professor, Department of Dental Clinical Specialties, School of Dentistry, Universidad Complutense of Madrid, Spain.

***Corresponding Author: Carmen López Carriches**

Associate Professor, Department of Dental Clinical Specialties, School of Dentistry, Universidad Complutense of Madrid, Spain.

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ABSTRACT

Third molar extraction is a common prophylactic procedure, which should be reevaluated in aged patients with medical conditions, due to possible intra-operative complications. When infection, tumors, cysts or other oral pathologies are associated to third molars, surgical approach is indicated. We report a case of a 94 year old female patient with an infectious episode related to an impacted third molar who undertook surgery. According to the reviewed literature, third molars extractions in elderly patients are not very common due to previous extraction in earlier ages. The main reasons of third molar extractions in aged patients are: infection, reversible pulpitis, pericoronitis and chronic gingivitis.

KEYWORDS: (Third molar) (Aged) (Third molar extraction) (Elderly) (Oral Surgical Procedure) (Tooth Extraction).

INTRODUCTION

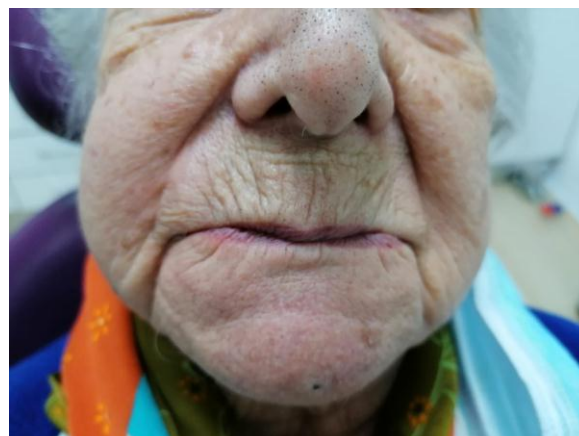
Third molar extraction is the most frequent procedure performed by oral surgeons. Due to the improvement of instruments efficacy and pharmaceuticals, prophylactic extraction of asymptomatic third molars is a common practice in European dental offices and hospitals.^[1] Although, some professionals prefer monitoring third molars when there is no related pathology and specially in aged patients with medical conditions.^[2] A systematic Cochrane review has concluded that there is no eligible studies that report the effects of removal compared with retention of asymptomatic disease-free impacted wisdom teeth on health-related quality of life.^[3] However, extraction of symptomatic third molars are clearly indicated when there is presence of infection or other related oral pathologies.^[4]

CASE REPORT

A 94 year old female patient, with no medical history of interest except for dementia, presented an important inflammation in the buccal region and the body of the mandible, also an abscess with suppuration in the oral cavity [Fig. 1]. The patient was an upper and lower partial denture wearer and was very collaborative.

Due to the presence of infection, Amoxicillin 750mg was prescribed pre-operatively for seven days and a orthopantomographic radiograph was taken [Fig. 2]. The

orthopantomography revealed the inclusion of the lower right third molar and the presence of an enlarged dental follicle. There was a close relationship between the third molar and inferior alveolar nerve, however a CBCT was not taken due to the inconvenience it supposed to the patient having to go to other center and the consequent higher cost. Also the family didn't want to go to an hospital considering the risk of getting infected of COVID-19.



[Fig. 1]. Extraoral aspect of the patient.



[Fig. 2]. Initial orthopantomography.

Patient undertook surgery, in which the third molar and its follicular sac were dissected under local anesthesia (Articaine 40/0,005 mg/ml) [Fig. 3-6]. A Supracrestal reduced incision and the extraction were performed with no intraoperative complications.



[Fig. 3] Presence of inflammation prior to surgery.



[Fig. 4] Incision.



[Fig. 5] Extraction.



[Fig. 6] Suture.

The third molar and its capsule were not sent for anatomopathological examination due to the patients families decision. [Fig. 7] Amoxicillin 750mg was prescribed post-operatively for seven days and pain was controlled with Paracetamol 1g.



[Fig. 7] Third molar and follicular sac.

The patient had her suture removed 7 days after surgery. Post-operative complications were not observed and the patient remained asymptomatic. [Fig. 8] Regular follow up was performed.



[Fig. 8]: Suture removed.

DISCUSSION

A study by Baensch and cols.^[5] analyzed 300 panoramic radiographs of over 65 year old patients, observing that 24% had at least one third molar and only 6,5% of patients had a retained third molar. This suggests most patients over 65 years had previously had their third molars extracted.

Similar findings were observed in a group of patients with 8199 extractions of third molars. The average age of extraction was 36,4 years old and just 6% of the total of extractions were of patients between 70 and 99 years old (2% surgical).^[6]

Moreover, Anyanechi and cols (7) evaluated extractions of third molars in 1261 patients above 50 years old, (mean age 65 ± 3.8), including only three patients 80-89 years old. A total of 287 patients had impacted third molars (333 teeth) and only 18.4% were symptomatic

As evidenced, extractions of third molars in elder patients are not very common due to previous extraction in earlier ages. In addition, surgical approach of third molars during elder age is avoided since there is a higher rate in intraoperative complications in these patients. Baensch and cols.^[5] studied the records of two groups of 127 patients each, Group A (over 65 years old) and Group B (15-20 years old), who underwent a third molar surgical extraction. He observed a higher rate of intraoperative complications (mandibular fracture and trauma of adjacent teeth) and postoperative complications (bleeding and infection) in Group A vs Group B (22% vs 3%) ($p < 0.01$). Also 9% of elder patients required reoperation due to postoperative bleeding or tooth remaining.

Nevertheless, the extraction of symptomatic teeth has to be performed when necessary on these patients. The three main causes of extractions in over 65 year old patients are: caries producing chronic reversible pulpitis, pericoronitis and chronic gingivitis.^[7]

Moss and cols.^[8] observed in a group of 342 subjects with a mean age of 75 years old that at least one visible

third molar 32% had caries. Venta and cols.^[9] studied 99 third molars of 293 patients with a mean age of $79 \pm 3,8$ years old. Every third molar presented a pathology, 23% where partially or completely impacted and 2% presented a cyst or tumour. A study conducted by Tambuwala and cols.^[10] observed 7,7% of follicles of extracted third molars where infected and 17% had cystic changes.

Dentigerous cyst is the second most common odontogenic cyst (18% of total) after radicular cyst.^[11] Around $\frac{1}{4}$ appear in the mandibular region, being the lower third molar the most common place of appearance followed by the upper maxilla.^[12]

Osaki and cols.^[13] studied 41 patients over 60 years old observing that 26 patients presented pericoronitis and 4 patients perimandibular fistula. Irritation caused by the denture may have been a co-factor of infection in 10 patients.

CONCLUSION

Extractions of third molars in elderly patients are not common and should be reevaluated due to possible intraoperative complications (mandibular fracture and trauma of adjacent teeth) and postoperative complications (bleeding and infection). When infection or other oral pathology is associated to third molars, a surgical approach may be the best therapeutical decision. Studies of extractions in elder population are very scarce. However, as evidenced in this case, third molars may be present in aged patients, and after a correct diagnosis a surgical approach may be necessary.

REFERENCES

1. Andersson L., Kahnberg K. Pogrel, M. A. Oral and maxillofacial surgery. 1st ed. Chichester: Wiley-Blackwell, 2010.
2. Kandasamy S. Evaluation and management of asymptomatic third molars: Watchful monitoring is a low-risk alternative to extraction. *Am J Orthod Dentofacial Orthop*, 2011; 140(1): 15.
3. Ghaemini H, Perry J, Nienhuijs ME, Toedtling V, Tummers M, Hoppenreijts TJ, et al. Surgical removal versus retention for the management of asymptomatic disease-free impacted wisdom teeth. *Cochrane Oral Health Group*, editor. *Cochrane Database Syst Rev* [Internet], 2016; [cited 2020 Oct 31]; Available from: <http://doi.wiley.com/10.1002/14651858.CD003879.pub4>.
4. Richards D. Management of unerupted and impacted third molar teeth. *A National Clinical Guideline. Evid Based Dent.*, 2000; 2(2): 44–5.
5. Baensch F, Kriwalsky MS, Kleffmann W, Kunkel M. Third Molar Complications in the Elderly—A Matched-Pairs Analysis. *J Oral Maxillofac Surg*, 2017; 75(4): 680–6.

6. Kautto A, Vehkalahti MM, Ventä I. Age of patient at the extraction of the third molar. *Int J Oral Maxillofac Surg*, 2018; 47(7): 947–51.
7. Anyanechi CE, Saheeb BD, Okechi UC. Is prophylactic removal of impacted mandibular third molar justified in all patients? A prospective clinical study of patients 50 years and above. *Afr Health Sci.*, 2019; 19(1): 1789.
8. Moss KL, Beck JD, Mauriello SM, Offenbacher S, White RP. Third Molar Periodontal Pathology and Caries in Senior Adults. *J Oral Maxillofac Surg*, 2007; 65(1): 103.
9. Ventä I, Kylätie E, Hiltunen K. Pathology related to third molars in the elderly persons. *Clin Oral Investig*, 2015; 19(8): 1785–9.
10. Tambuwala AA, Oswal RG, Desale RS, Oswal NP, Mall PE, Sayed AR, et al. An Evaluation of Pathologic Changes in the Follicle of Impacted Mandibular Third Molars. *J Int Oral Health JIOH*, 2015; 7(4): 58–62.
11. Jones AV, Craig GT, Franklin CD. Range and demographics of odontogenic cysts diagnosed in a UK population over a 30-year period. *J Oral Pathol Med*, 2006; 35(8): 500–7.
12. Nuñez-Urrutia S, Figueiredo R, Gay-Escoda C. Retrospective clinicopathological study of 418 odontogenic cysts. *Med Oral Patol Oral Cirugia Bucal*, 2010; 15(5): e767-773.
13. Osaki T, Nomura Y, Hirota J, Yoneda K. Infections in elderly patients associated with impacted third molars. *Oral Surg Oral Med Oral Pathol Oral Radiol Endodontology*, 1995; 79(2): 137–41.