



## Assessment of Pain Experience After Simple Tooth Extraction

Amrit Pal Singh<sup>1\*</sup>, Parveen Akhter Lone<sup>2</sup>, Sourav Sharma<sup>3</sup>, Sabiha Parwaiz<sup>4</sup>

<sup>1</sup>Lecturer, Department of Oral and Maxillofacial Surgery, Indira Gandhi Government Dental College, Jammu, India. Email: dramrit.singh15@gmail.com

Orcid ID: 0000-0003-4998-8016

<sup>2</sup>Professor & Head, Department of Oral and Maxillofacial Surgery, Indira Gandhi Government Dental College, Jammu, India.

Email: parveen.lone@yahoo.com

Orcid ID: 0000-0003-2823-1057

<sup>3</sup>Senior Resident, Department of Oral and Maxillofacial Surgery, Indira Gandhi Government Dental College, Jammu, India. Email: dr.souravsurgeon@gmail.com

Orcid ID: 0000-0003-3532-8244

<sup>4</sup>House Surgeon, Department of Oral and Maxillofacial Surgery, Indira Gandhi Government Dental College, Jammu, India. Email: sabihaparwaiz@gmail.com

Orcid ID: 0000-0001-8576-0479

\*Corresponding author

Received: 04 April 2022

Revised: 17 May 2022

Accepted: 27 May 2022

Published: 23 June 2022

### Abstract

**Background:** Removal of teeth causes pain, swelling, and difficulty in opening the mouth. The present study was conducted to assess pain experience after simple tooth extraction. **Material & Methods:** 90 patients undergoing extraction of both genders were recorded. Pain assessment was recorded on the 10-mm NS ("No pain" to "Worst pain possible"). The character of pain was indicated (yes/no) using 4 descriptors according to the McGill Pain Questionnaire: constant pain, shooting pain, dull pain, and pain when chewing or biting. **Results:** Out of 90 patients, males were 40 and females were 50. Pain characters was constant in 30, shooting in 15, mild in 12, when chewing in 8 and none in 25 cases. The difference was significant ( $P < 0.05$ ). Pain occurred in 52 chronically inflamed teeth and 38 grossly decayed teeth. The difference was significant ( $P < 0.05$ ). **Conclusions:** Pain after tooth extraction is common and hence use of analgesics and anti-inflammatory is recommended.

**Keywords:-** Analgesics, Anti-inflammatory, Pain.

## INTRODUCTION

Removal of teeth causes pain, swelling, and difficulty in opening the mouth (trismus). Numerous studies evaluated the effects of different anti-inflammatory drugs on these responses with the aid of techniques including ultrasonography, visual analog pain scales, photography, and monitoring of analgesic ingestion.<sup>[1]</sup>

Postoperative pain is related significantly to the amount of surgical trauma. Surgical removal of bony impactions and osseous periodontal surgery are more traumatic and

produce more intense pain when compared with simple uncomplicated tooth extraction.<sup>[2]</sup> Little information is available in the literature about pain experience after simple uncomplicated tooth extraction.<sup>[3]</sup> Most of the literature focuses on postoperative pain after surgical removal of impacted third molars or on the effectiveness of different pharmaceutical options in combating postsurgical pain.<sup>[4]</sup> Pain is also one of the most common postoperative complications of extraction and might be caused by the release of pain mediators from the injured tissues. Pain is an important factor in clinical practice and could even discourage

patients from seeking dental treatment.<sup>[5]</sup> It begins after the anesthesia subsides and reaches its peak levels during the first postoperative day. If dry socket or infection occur, the onset of inflammation will complicate alleviation of postoperative pain.<sup>[6]</sup> The present study was conducted to assess pain experience after simple uncomplicated tooth extraction.

### MATERIAL AND METHODS

The present study comprised of 90 patients undergoing extraction of both genders. The consent was obtained from all enrolled patients.

Data such as name, age, gender etc. was recorded. Pain assessment was recorded on the

10-mm NS (“No pain” to “Worst pain possible”). The character of pain was indicated (yes/no) using 4 descriptors according to the McGill Pain Questionnaire: constant pain, shooting pain, dull pain, and pain when chewing or biting. Data thus obtained were subjected to statistical analysis. P value < 0.05 was considered significant.

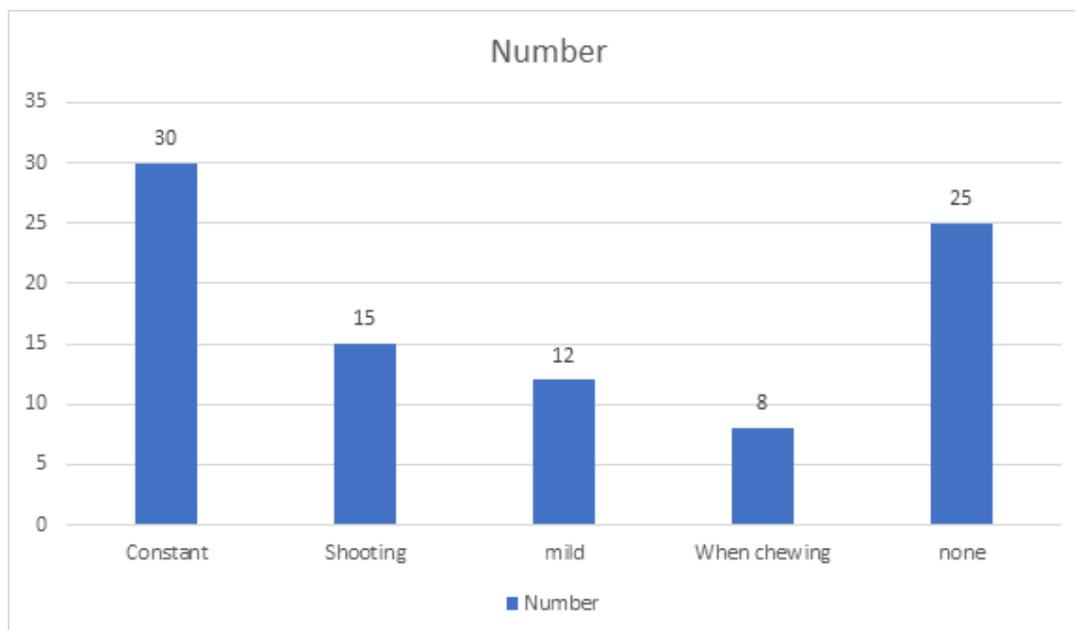
### RESULTS

[Table 1] shows that out of 90 patients, males were 40 and females were 50.

[Table 2, Figure 1] shows that pain characters was constant in 30, shooting in 15, mild in 12, when chewing in 8 and none in 25 cases. The difference was significant (P< 0.05).

**Table 1:** Distribution of patients

Total- 90		
Gender	Males	Females
Number	40	50



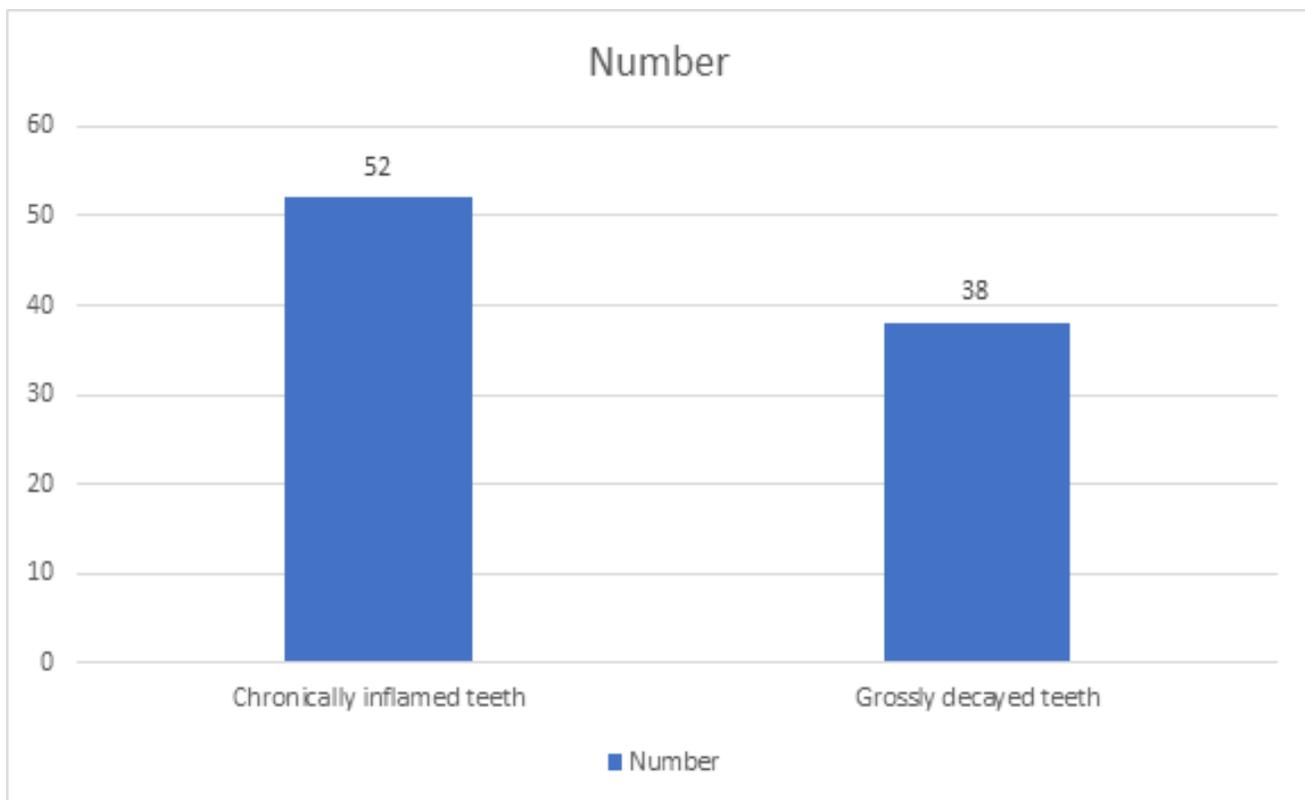
**Figure 1:** Pain characters reported by patients

**Table 2:** Pain characters reported by patients

Pain characters	Number	P value
Constant	30	0.05
Shooting	15	
Mild	12	
When chewing	8	
None	25	

**Table 3:** Type of tooth and pain

Type of tooth	Number	P value
Chronically inflamed teeth	52	0.01
Grossly decayed teeth	38	



**Figure 2:** Type of tooth and pain

[Table 3, Figure 2] shows that pain occurred in 52 chronically inflamed teeth and 38 grossly decayed teeth. The difference was significant ( $P < 0.05$ ).

## DISCUSSION

One of the most common procedures carried out in dental clinics and the most frequent task



done at oral and maxillofacial surgery clinics is the extraction of teeth.<sup>[7]</sup> This procedure is frequently followed by complications in the mandible including both iatrogenic (e.g., nerve injury, bone fractures, etc.) and inflammatory ones, such as dry socket, postoperative pain, delayed healing, postoperative infection, hematoma, swelling, trismus, etc.<sup>[8]</sup> Although the overall complication rate might be generally low, and most complications are minor, this surgery is so frequent that the population's morbidity of complications may be noticeable; thus, identifying methods to control or reduce them is a major concern.<sup>[9]</sup> Besides, not all complications are rare. There are frequent and debilitating complications as well, including postoperative pain.<sup>[10]</sup> The present study was conducted to assess pain experience after simple uncomplicated tooth extraction.

We found that out of 90 patients, males were 40 and females were 50. Pain characters was constant in 30, shooting in 15, mild in 12, when chewing in 8 and none in 25 cases. Alkhateeb et al,<sup>[11]</sup> assessed pain experience after simple uncomplicated tooth extraction and to see if there is a need to prescribe analgesic drugs after such a procedure. Pain intensity was assessed on a numeric scale, and use of analgesic drugs and pain quality were recorded. At the evening of extraction 81.8% of patients had pain. Female gender predominance in pain reporting was statistically significant on post-extraction days 3 and 5. Chronically inflamed teeth caused the highest mean pain intensity scores and non-smokers showed significantly higher mean pain intensity scores compared with smokers. Mild pain was experienced by most patients

(38.6%) on the evening of extraction. It was found that 55.3% of participants (largely females) used analgesic drugs on the evening of extraction, and 6.8% of participants still used analgesic drugs on day 7 post-extraction. There was a significant correlation between mean pain intensity score and previous dental injection pain.

We observed that pain occurred in 52 chronically inflamed teeth and 38 grossly decayed teeth.

Gan TJ,<sup>[12]</sup> conducted a cross-sectional study upon a sample 130 patients to assess intensity of post-operative pain and unfavorable outcomes after simple tooth extraction. Assessment of general and dental unfavorable post-operative effects experienced was done. Pain intensity was assessed on a numeric scale, and use of analgesic drugs and pain quality were recorded. Results showed that the greatest possibility of appearance of an unfavorable outcomes, was on day 2 post-extraction i.e. 66.9%, followed by day 3 post-extraction (20.8%). Pain was a predominant complaint that was felt till the third day. It was highest on the day of extraction (6.33 on a numerical scale with the upper limit of ten). The intensity of pain linearly declined on day 2 to day 3 i.e. from a mean score of 3.68/10 to 1.2/10. The most notable unfavorable outcome was of swelling on both, 42.3% on day 2 and 11.5% on day 3 of post-extraction. Other outcomes included dry socket, intensified sensitivity, bleeding and temporary depressive symptoms such as general aches, loss of appetite, anxiety and negative insight.

Cheung et al,<sup>[13]</sup> found that healing of normal uncomplicated extraction alveolus caused



moderate to severe pain. Adeyemo et al,<sup>14</sup> found that uncomplicated extraction socket healing was associated with mild or moderate pain up to the third day after extraction in 9.6% of cases whereas 2.4% of patients had mild pain throughout the seventh post-extraction day.

## REFERENCES

1. Capuzzi P, Montebugnoli L, Vaccaro MA. Extraction of impacted third molars. A longitudinal prospective study on factors that affect postoperative recovery. *Oral Surg Oral Med Oral Pathol.* 1994;77(4):341-3. doi: 10.1016/0030-4220(94)90194-5.
2. Fisher SE, Frame JW, Rout PG, McEntegart DJ. Factors affecting the onset and severity of pain following the surgical removal of unilateral impacted mandibular third molar teeth. *Br Dent J.* 1988;164(11):351-4. doi: 10.1038/sj.bdj.4806453.
3. Gadve VR, Sheno R, Vats V, Shrivastava A. Evaluation of Anxiety, Pain, and Hemodynamic Changes during Surgical Removal of Lower Third Molar under Local Anesthesia. *Ann Maxillofac Surg.* 2018;8(2):247-253. doi:10.4103/ams.ams\_216\_18
4. Fillingim RB, Gear RW. Sex differences in opioid analgesia: clinical and experimental findings. *Eur J Pain.* 2004;8(5):413-25. doi: 10.1016/j.ejpain.2004.01.007.
5. Sabino MA, Honore P, Rogers SD, Mach DB, Luger NM, Mantyh PW. Tooth extraction-induced internalization of the substance P receptor in trigeminal nucleus and spinal cord neurons: imaging the neurochemistry of dental pain. *Pain.* 2002;95(1-2):175-86. doi: 10.1016/s0304-3959(01)00397-9.
6. Troullos ES, Hargreaves KM, Butler DP, Dionne RA. Comparison of nonsteroidal anti-inflammatory drugs, ibuprofen and flurbiprofen, with methylprednisolone and placebo for acute pain, swelling, and trismus. *J Oral Maxillofac Surg.* 1990;48(9):945-52. doi: 10.1016/0278-2391(90)90007-0.
7. Fagade OO, Oginni FO. Intra-operative pain perception in tooth extraction--possible causes. *Int Dent J.* 2005;55(4):242-6. doi: 10.1111/j.1875-595x.2005.tb00322.x.
8. Tanwir F, Altamash M, Gustafsson A. Perception of oral health among adults in Karachi. *Oral Health Prev Dent.* 2006;4(2):83-9.
9. Peretz B, Mersel A. Non-institutionalized elderly dental patients in Israel: socio-demographics, health concerns, and dental anxiety. *Spec Care Dentist.* 2000;20(2):61-5. doi: 10.1111/j.1754-4505.2000.tb01145.x.
10. Rakhshan V. Common risk factors for postoperative pain following the extraction of wisdom teeth. *J Korean Assoc Oral Maxillofac Surg.* 2015;41(2):59-65. doi: 10.5125/jkaoms.2015.41.2.59.
11. Al-Khateeb TH, Alnahr A. Pain experience after simple tooth extraction. *J Oral Maxillofac Surg.* 2008;66(5):911-7. doi: 10.1016/j.joms.2007.12.008.
12. Gan TJ. Poorly controlled postoperative pain: prevalence, consequences, and prevention. *J Pain Res.* 2017;10:2287-2298. doi:10.2147/JPR.S144066
13. Cheung LK, Chow LK, Tsang MH, Tung LK. An evaluation of complications following dental extractions using either sterile or clean gloves. *Int J Oral Maxillofac Surg.* 2001;30(6):550-4. doi: 10.1054/ijom.2000.0128.
14. Adeyemo WL, Ladeinde AL, Ogunlewe MO. Clinical evaluation of post-extraction site wound healing. *J Contemp Dent Pract.* 2006;7(3):40-9.

## CONCLUSIONS

Authors found that pain after tooth extraction is common and hence use of analgesics and anti-inflammatory is recommended.

Source of Support: Nil, Conflict of Interest: None declared