



Assessment of Quality of Life after Impacted Lower Third Molar Surgery

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ABSTRACT

The aim of the study was to assess the quality of life of patients in the early post-operative period following impacted lower third molar surgery. Health related quality of life [HRQOL] is an assessment of how individuals' well-being may be affected over time by a disease and treatment. It has become a very important issue within oral surgical practice. This study was conducted among 50 patients who underwent surgical removal of impacted lower third molars under local anesthesia. Patients were asked to complete a 14 item Oral Health Impact Profile (OHIP-14) questionnaire, pre-operatively and on the first day, third day and seventh day after the lower third molar surgery. The data extracted were tabulated, statistically analyzed using SPSS Version 20.0 and results obtained. When compared to the preoperative scores, there was a significant increase in the mean OHIP-14 scores for the first and third post-operative days. The mean OHIP-14 scores on the 7th day returned to baseline scores. There was a significant deterioration in oral health related quality of life in the immediate postoperative period, which slowly returned to preoperative levels in a week. The comparative data of the quality of life before and after third molar surgery could assist the surgeon in informing the patients about the expectations after third molar surgery.

Keywords: Lower third molar, quality of life, postoperative period, pain, trismus, impacted tooth, surgical procedure.

INTRODUCTION

Third molar surgical extraction is a common procedure performed in all dental clinics.¹ Many young adults are in a dilemma, whether to get their third molars extracted or not. Patients often ask the dental surgeon about the effects of the surgical removal of third molars on their daily routine. Some patients specifically ask about the duration of the pain and other possible outcomes after the removal of third molar. Hence it is necessary to explore the effect of third molar surgery on the Quality of Life (QOL) in the post-operative period. The concept of quality of life (QOL) is essentially subjective, determined from the patient's point of view. Thus, an appropriate investigation and analysis of QOL as an indicator of surgical treatment outcome is a task of difficulty.

The common signs and symptoms following third molar surgery, as given in abundance of literature are pain, swelling, trismus and paresthesia.² But little is known about how much it affects their day to day life or life quality. Hence it is essential to assess the QOL with the help of a questionnaire or a tool.³ The aim of this study was to assess the quality of life of patients after lower third molar extraction with the help of Oral Health Impact Profile (OHIP) questionnaire.

METHODS

A sample of 50 asymptomatic patients, undergoing surgical removal of their impacted lower third molar teeth in Saveetha dental college and hospitals, Saveetha university, Chennai were recruited to participate in the

study. Medically compromised patients were excluded from the study. A written consent was obtained from all patients and surgery was done under local anesthesia following the standard surgical and anaesthetic protocols used at the teaching hospital. Antibiotics and analgesics were prescribed for all patients and standard postoperative instructions were given. An Oral health impact profile [OHIP-14] questionnaire, which consists of 14 items were given to be filled by patients' pre operatively. Patients were explained in the local language if they needed any clarification about questions. Patients were recalled on the 1st, 3rd and 7th postoperative days [POD] to complete the questionnaire again.

For OHIP-14 questionnaire each item was scored: never-score 0, hardly ever- score 1, occasionally- score 2, fairly often- score 3, very often- score 4. The possible total score range from 0 to 56; higher the scores, the poorer the QOL.

Day 0 is preoperative status or baseline data. The data extracted were tabulated, statistically analyzed using SPSS Version 20.0 and results obtained. For analysis, the total scores were summated, mean was calculated. Assessment of the variation between the pre-operative and postoperative states was done by the paired student's t-test. P<0.05 is considered as statistically significant.

RESULTS

All the patients recruited completed the questionnaire. Among the patients in the study, there were 42% male and 58% female participants.



Oral health impact profile [OHIP-14] SCALE

Age of patient: SEX: M/F

Type of impaction: mesioangular / distoangular/ vertical / horizontal

Tooth number: Unilateral/ bilateral:

Parameters	DAY 0	DAY 1	DAY 3	DAY 7
Function limitations	1. Difficulty in Speech			
	2. Sense of taste had worsened			
Physical pain	3. Painful ache in the mouth			
	4. Uncomfortable to eat			
Psychological discomfort	5. Have been self-conscious			
	6. Felt tense			
Physical disability	7. Unsatisfactory diet			
	8. Had to interrupt meals			
Psychological disability	9. Difficult to relax			
	10. Embarrassed			
Social disability	11. Been irritable with other people			
	12. Difficulty in doing usual jobs			
Handicap	13. Felt unsatisfactory life			
	14. Unable to function			

The total scores from the OHIP-14 questionnaire for each patient were calculated and tabulated (Table 1). Mean OHIP-14 scores were calculated, which were higher on 1st and 3rd postoperative days, indicating deterioration of patient’s quality of life over the immediate postoperative study period (i.e. 1st day and 3rd day). Mean OHIP-14 scores were closer to baseline (preoperative) scores by the 7th postoperative day. Variations in oral health related quality of life (OHIP-14) scores between preoperative and postoperatively states were statistically significant in the early post-operative period after third molar surgery as P value was <0.05, hence considered as statistically significant (Table 2).

Table 1: OHIP -14 Scores for individual patients

Patient number	Sex	Day 0	Day 1	Day 3	Day 7
1	female	0	32	16	2
2	male	0	21	15	1
3	female	1	24	12	2
4	female	1	35	16	2
5	male	0	23	12	0
6	female	0	26	17	2
7	male	1	31	19	1
8	female	1	32	23	2
9	female	1	28	16	1
10	male	0	22	19	0
11	female	0	25	19	2
12	male	0	28	15	0
13	female	0	31	17	0
14	male	1	26	11	1
15	female	2	24	16	2
16	male	2	27	19	2
17	female	1	22	16	2

18	female	0	20	8	1
19	female	2	19	14	1
20	male	2	21	12	1
21	female	0	21	20	1
22	female	0	27	16	0
23	male	2	23	18	2
24	male	0	25	17	1
25	female	0	31	21	1
26	female	1	23	15	0
27	male	1	27	12	1
28	female	0	24	11	0
29	male	1	21	16	2
30	female	1	20	11	0
31	female	0	33	21	1
32	male	2	21	11	2
33	female	1	19	12	0
34	female	0	25	16	1
35	male	2	22	11	1
36	female	0	23	17	0
37	female	1	29	19	2
38	male	0	16	8	0
39	male	1	28	14	1
40	female	0	21	15	0
41	female	2	18	10	1
42	male	1	25	20	1
43	male	0	29	17	0
44	female	2	20	14	2
45	male	1	19	9	0
46	male	0	22	15	1
47	female	1	22	19	2
48	female	1	23	16	1
49	female	1	19	13	1
50	male	0	23	17	0



Table 2: Mean OHIP-14 Scores

	Day 0	Day 1	Day 3	Day 7
N	50	50	50	50
Mean	0.74	24.32	15.26	1.00
SEM	0.106	0.618	0.500	0.111
P-value		0.000	0.000	0.026

P<0.05 is considered as statistically significant

All the patients showed relief of symptoms by the 7thPOD. Around 32(64%) patients experienced difficulty in pronouncing words on the 1stPOD, 19(38%) patients experienced this difficulty on the 3rdPOD whereas only 2(4%) patients had this problem till the 7thPOD. Almost all patients experienced painful ache in the mouth in the 1stPOD which gradually decreased in intensity by the 7thPOD. Physical pain, psychological discomfort and physical disability were higher in the 1st and 3rd POD which gradually decreased and got restored to normal by the 7th POD. Similarly most other symptoms improved by one week.

DISCUSSION

Nowadays patients demand detailed explanation about the surgical dental procedures and their sequelae as they have to plan their schedules accordingly in the post-operative period. Most of the dental surgeons give routine post-operative instructions as mentioned in the literature. But a more detailed assessment of patients' quality of life in the post-operative period will enable them to give a proper explanation and will help in mentally preparing the patients for the surgical procedure.

This study showed that the surgical removal of third molars under local anesthesia causes significant changes on several aspects of patients' daily life during the early postoperative period, especially physical pain and interference during eating. The results of the study showed that the Quality of life of all the patients' undergoing third molar surgery was affected in the early post-operative period. However, assessment of pain perception and impact of the surgery in patient's quality of life is always difficult due to the various factors affecting the nature of this process.⁴ The answers given by the patients for the questionnaire are subjective, which can be a drawback.^{5,6}

In our study, 92% patients showed difficulty in continuing their daily activities on the 1st POD, which reduced to 64% on the 3rdPOD and 4% on the 7thPOD. This information can help patients decide expected sick leave periods after the surgical extraction in their labor environment.⁷ In a similar study about the quality of life after third molar surgery showed that the patients discontinued working in the postoperative period, with a sick-leave extension of approximately 5 days.⁸

In our study, the mean scores of the pain and psychological factors reduced to 1.00 on the 7thPOD which confirms the studies of other authors like Conrad et al.⁹ and White et al.¹⁰ who reported that pain scores and other studied parameters normalized around day 9, delimiting the QOL influence of these procedures to 9 postoperative days. In this study, 64% of the patients showed difficulty in chewing food and to continue with a normal diet by 3rd postsurgical day. Similar results have been reported by Savin et al.¹¹ in which the inability to masticate or swallow and trismus are described as the major problems during the first postoperative week. It was also stated that some patients can experience unrecognized side effects and deterioration in their quality of life which shows little improvement in the first postoperative week.¹¹

Thus in our study there was a significant deterioration in oral health related quality of life in the immediate postoperative period during the first 3 days which slowly returned to preoperative levels in a week. Our study results are in accordance to several other studies which reported severe deterioration in a patient's quality of life during the first 3 days postoperatively.^{4, 7, 12, and 13}

Patients have a right to know if their lifestyles are to be compromised by the effects of their treatment and it is the duty and liability of the dental surgeons to keep their patients well informed of all the postoperative sequelae of the impacted lower third molar surgery.

CONCLUSION

In the immediate postoperative period most of the patients will experience deterioration in quality of life, interferences in their daily activities and a compromised social life which will normalize gradually by the end of the 1st postoperative week. This information is valuable to patients deciding on third molar surgery and for clinicians in providing informed consent. This would help the patient to plan their future activities and prevent negligence of oral health during the post-operative period.

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