

# ARTICLE ANALYSIS & EVALUATION

## Removal of mandibular third molars improved patients' quality of life

### Original Article

McGrath C, Comfort MB, Lo EC, Luo Y. Can third molar surgery improve quality of life? A 6-month cohort study. *J Oral Maxillofac Surg* 2003 Jul;61(7):759-63; discussion 764-5.

### Level of Evidence

4

### Purpose

To evaluate the patients' perception of changes in quality of life 6 months after the removal of third molars

### Source of Funding

Information not available

### Type of Study/Design

Cohort study

## Summary

### SUBJECTS

A total of 100 patients scheduled to have 1 mandibular third molar removed participated in the study. Eighty-eight patients completed the study, 64 women (73%) and 24 men (27%). The mean age of the patients was  $26 \pm 7$ (SD) years of age. Fifty-two percent of the third molars were located on the left, and 48% were on the right.

### THERAPY

Each patient had 1 mandibular third molar removed. Extractions were performed under local anesthesia using a buccal flap and a lingual retractor to protect the tissues. The teeth were sectioned, bone was removed with a bur, and acetaminophen and codeine were prescribed for pain relief.

### MAIN OUTCOME MEASURE

On the day of surgery (preoperatively), 1 week, and 1, 3, and 6 months after extraction of the third molars each patient completed the 14-item Oral Health Impact Profile (OHIP-14) and the 16-item UK Oral Health Related Quality of Life measure (OHQoL-UK). The results from the postoperative questionnaires were compared with the results of the preoperative questionnaire.

### MAIN RESULTS

At 1 week after removal of the third molars, there was a deterioration in the quality of life compared with the preoperative evaluation using both the OHIP-14 and OHQoL-UK measures ( $P < .001$ ). At 1 month, however, there was significant improvement in the quality-of-life measures compared with the preoperative assessment. The quality-of-life measures continued to improve at the 3- and 6-month follow-up evaluations ( $P < .01$ ). There were improvements in many quality-of-life measures captured by the OHQoL-UK and greater than 50% improvement across all the OHIP-14 measures. Patients

with a history of pericoronitis before surgery demonstrated greater improvement in their quality-of-life measures than patients without a history of pericoronitis ( $P < .05$ ).

## CONCLUSIONS

The removal of mandibular third molars resulted in the long-term improvement in the patients' quality-of-life measures after the initial deterioration observed immediately after surgery. The improvement in the quality of life was greater for patients with a history of pericoronitis than for patients without a history of pericoronitis.

## Commentary and Analysis

The strength of this study is that the investigators measured quality of life after removal of third molars. Patients' perceptions of recovery after third molar surgery are important especially when considering how treatment influences oral health. Recently, interest in the effects of surgical procedures on quality of life has grown especially with regard to removal of asymptomatic third molars.

The design of this study limits general application of the outcomes. Inclusion and exclusion criteria for participation in the study were not established before initiating the clinical trial. The absence of selection criteria resulted in the majority of the patients, 78%, having a history of pericoronitis. The subjects in this study may not be representative of patients that commonly present for removal of third molars.

In addition to global outcomes, clinical outcomes (eg, dry socket, pain, bleeding) should be included in clinical trials examining the impact of third molar removal on quality-of-life measures. Global outcomes can be influenced by clinical outcomes and this information was not included or considered in this study.

The study did not include all the patient information that might influence outcome. Severity of impaction and pericoronitis as well as medical status was not reported in the study. The influence of these confounding variables should have been considered when the patients with pericoronitis were compared with the patients without a history of pericoronitis.

This clinical trial demonstrates that OHIP-14 and OHQoL-UK can be used to assess the influence of third molar extraction on patients' quality of life. OHIP-14 appeared to have greater sensitivity than the OHQoL-UK. Further studies are needed to examine the influence of clinical factors such as pericoronitis, severity of impaction, surgical complications, etc. The quality-of-life measures improved after removal of mandibular third molars but conclusions are limited by the study design and absence of relevant patient information.

### Reviewer:

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