



# Does watching a video on third molar surgery increase patients' anxiety level?

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**Objective.** To identify the effects of watching live taping of third molar removal on patients' anxiety levels before and after extraction.

**Study Design.** This study was based on a prospective, cross-sectional, observational investigation of the different patient education techniques about the effect of third molar removal on patients' anxiety level. A total of 333 patients were randomized into three groups: two study groups (for group 1, basic information was given verbally; for group 2, which was the study group, basic information was given verbally and through a movie on third molar extraction); and a control group (basic information was given verbally; it did not include information on operative procedures and recovery). Anxiety levels were assessed by using the Dental Anxiety Scale (DAS) and the Spielberger State-Trait Anxiety Inventory (STAI). Pain was assessed with a visual analog scale. Statistical analysis was performed with SPSS 16.0.

**Results.** Group 2 patients were significantly more anxious before the surgical procedure, and the most significant decreases in DAS and STAI scores were observed in that group. The age, surgery time, and education level were not correlated with anxiety or pain levels; however, female patients had high levels of anxiety ( $P < .05$ ).

**Conclusion.** Preoperative multimedia information increases the anxiety of patients undergoing third molar surgery. (Oral Surg Oral Med Oral Pathol Oral Radiol 2015;119:272-277)

Fear of dental procedures are recognized as one of the most common phobias in the patients and cause anxiety in 60% to 80% of the surgical patients.<sup>1-3</sup> Surgical extraction of wisdom teeth is widely carried out in dental practice in young adults and adolescents; among other dentistry procedures, it is usually associated with a high level of anxiety and discomfort.<sup>4-6</sup>

Wisdom teeth extraction in anxious patients could be difficult not only for patients but also for oral surgeons.<sup>4-7</sup> These patients are considered problematic, unreliable, uncooperative, and excessively complaining. Dentists find phobic patients difficult to manage, and this has a negative impact on the provision of effective dental care to such patients.<sup>2</sup> Dental treatments give rise to irritation, anger, and frustration on the part of patients, which, in turn, may cause stress to the operating surgeon, impairing the performance of the surgeon and often leading to longer operative time.<sup>3,4</sup> A significantly longer duration of surgery, a higher incidence of facial swelling, and higher levels of pain have been observed in anxious patients.<sup>5</sup>

Dental anxiety is a complex phenomenon affected by various factors, such as age, gender, education level, socioeconomic status, personal history, memory, and personality. Studies have shown that female gender,<sup>1-4</sup>

young age,<sup>5,6</sup> low socioeconomic status,<sup>5</sup> and low education level are associated with high levels of anxiety.<sup>1,3</sup>

Improving knowledge about a surgical procedure, including factors relevant to the proposed care and post-operative recovery, has been useful in managing anxious patients and reducing situational anxiety.<sup>7,8</sup> Written materials have been used as an effective method for delivering information to surgery patients; however, not all patients are literate enough to read and understand an information sheet.<sup>9,10</sup> Some studies<sup>11,12</sup> have demonstrated that informing patients by means of videos showing the procedures that the patients will be undergoing has decreased preoperative anxiety and increased patient comprehension; however, other studies<sup>13,14</sup> have shown that these effects were insignificant. Therefore, the ideal medium for the provision of preoperative information is unclear. The purpose of this study was to identify the effects of different patient education techniques on patients' anxiety levels before and after third molar extraction.

## MATERIALS AND METHODS

### Patients

This study was based on a prospective, cross-sectional, observational investigation of different patient education

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Received for publication Jul 12, 2014; returned for revision Sep 26, 2014; accepted for publication Oct 17, 2014.

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2212-4403/\$ - see front matter

<http://dx.doi.org/10.1016/j.oooo.2014.10.012>

## Statement of Clinical Relevance

We reported that watching a movie about surgical third molar extraction may increase anxiety levels in the patients. Moreover, it has negative results on postoperative pain control.

techniques for third molar removal and their effect on patients' anxiety level. The aim was to identify the effects of watching live taping of third molar removal on patients' anxiety levels before and after third molar extraction. The study sample consisted of all patients with indications for third molar removal in an ambulatory environment and scheduled to undergo third molar extraction from October 2012 to August 2013. Patients were referred for treatment without distinction as to gender, race, or socioeconomic status. After an explanation of the purpose of the study was given, each patient was asked whether he or she would like to participate. The study complied with the Helsinki Declaration. Approval was obtained from the Local Ethical Committee (no: 2013/110).

A minimum sample size of 90 participants per group was determined by using standard statistical criteria ( $\alpha=0.04$ ,  $\beta=0.25$ ); this yielded a power of 80% for the primary outcome of the study. At the beginning of the study, more patients were added to each group to compensate for potential loss of power due to study dropouts.

Inclusion criteria included both genders; ages 18 to 25 years; American Society of Anesthesiology classification I or II; healthy, impacted, lower third molars; and IIIB surgical difficulty grade on the Pell–Gregory and Winter scales. Exclusion criteria included systemic illnesses, psychiatric diseases, local infection, tobacco use, oral contraceptive and regular sedative medication use, pregnancy, and lactation. None of the patients had pain before the third molar surgery. The teeth were extracted after or during orthodontic treatment without any complaint. Patients with previously bad dental treatment history were also excluded from the study, as negative experiences about the procedure could also cause higher anxiety levels.

Before the procedure, a brief explanation of the study was given, and an informed consent was obtained from each participant before being recruited into the study; after the procedure, routine postoperative instructions, such as wound care and hemostasis information and appropriate use of prescribed medications, were given to all of the patients.

### Study groups

Using computerized randomization, the patients were randomized into three treatment groups, each with 111 patients: two study groups (group 1, basic information given verbally, with details of operative procedures and recovery; group 2 [study group], basic information, given verbally and through a movie on third molar extraction with details of operative procedures and recovery); and a control group (basic information given verbally “but it was devoid of the details of the

operative procedures and recovery”). The researchers and patients were blinded to group allocation until after completion of baseline anxiety scoring. Staff members working in all study settings were unaware of patients' group allocations. The surgeon who carried out the blocks was blinded to the patient group allocation.

Group 1 and 2 patients were informed that local anesthesia would numb the area and that thus; they should not expect to feel pain. The patients were reassured that if they felt any pain, the surgeon would stop the procedure and provide further anesthesia. The patients were also advised not to confuse the unpleasant parts of the procedure, such as vibration of the burr and application of pressure, with actual pain.

### Operative procedure

The surgery was carried out under local anesthesia, without administration of pharmaceutical premedication or sedation. All patients were subjected to the same standardized surgical protocol by the same surgeon at each oral surgery clinic. The time necessary for the tooth extraction (starting from the first incision to the last suture), as well as the number of complications, was recorded.

After the surgical procedure, the patients received 1000 mg amoxicillin and 550 mg naproxen sodium orally for 5 days (two times a day) following surgery. Postoperatively, the patients received an aqueous 0.2% chlorhexidine mouth rinse (1 minute, three times daily) for 1 week. An icepack was then applied to the surgical area for at least 30 minutes.

### Preoperative movie

A 5-minute movie was made of a 23-year-old man undergoing third molar surgery was shown to group 2 (study group) patients. The movie began with an interview of the actual patient before surgery. The discussion included a description of the surgical procedure and the risks involved, specifically the risk of nerve injury. The next scene showed the patient being moved into the operating theater and the surgeons carrying out the third molar surgery.

### Measurement of anxiety

Before the surgical procedure and the viewing of the movie, baseline anxiety levels were measured while the patients were waiting in the reception area. Each patient was asked to complete a Dental Anxiety Scale (DAS), developed by Corah<sup>15</sup> in 1969, a specific measure of dental anxiety, and the Spielberger State-Trait Anxiety Inventory (STAI).<sup>16</sup> These are the most widely used instruments for measuring anxiety in clinical studies,

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