

Original Article

THE EFFECT OF COUNSELLING IN PREOPERATIVE ANXIETY AMONG THE PATIENTS UNDERGOING THIRD MOLAR SURGERY

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Objective: To determine the effect of counselling on pre-operative anxiety among the patients undergoing third molar surgery.

Methods: A randomized controlled trial was conducted in the department of maxillofacial surgery, Punjab Dental Hospital and Mayo Hospital, Lahore from September, 2013 to December, 2013. A total of 100 patients planned for third molar surgery by the maxillofacial surgeon on the basis of symptomatology and investigations and also having baseline anxiety above the cutoff point on Hamilton Anxiety Rating Scale (HAM-A) were selected and randomly divided into the control and the experimental groups. The pre-operative anxiety was assessed objectively and subjectively on Hamilton Anxiety Rating Scale (HAM-A) and Dental Anxiety Scale (DAS) (Urdu version) respectively at the time of booking the patient for the operation (session 1) and scoring was done. Detailed counselling was done to the experimental group in addition to providing information as usual which included routine briefing which was given to all the patients of both the groups. Preoperative anxiety was assessed again on the same scales in the same manner in both the groups just before the surgery (session 2) and the results were compared.

Results: A statistically significant difference was found in pre-operative anxiety scores of both the experimental and control groups between session 1 and session 2. In the experimental group, preoperative anxiety was significantly reduced after intervention (p -value=0.00) as compared to the control group in which it was significantly increased (p -value=0.00) just before the surgery.

Conclusion: Counselling is an effective method for reducing preoperative anxiety in patients undergoing third molar surgery.

Keywords: Preoperative anxiety, dental anxiety, third molar surgery, counselling.

Introduction

Third molar surgery is one of the commonest procedures carried out in the department of oral and maxillofacial surgery.¹ Owing to the special anatomical variations in third molars, surgical intervention is usually a traumatic experience.² It is associated with immense fear and various intra and postoperative complications leading to pre-operative anxiety in the individuals undergoing surgery. Pre-operative anxiety results in various physiological changes in the body which further worsens these complications.³ The common complications include excessive bleeding, damage to surrounding tissues, trismus, swelling and pain.⁴ About 10-20% of the adult population suffer from severe dental anxiety affecting the attendance in dental clinics adversely. Highly anxious individuals are often caught in a vicious cycle of fear whereby they avoid dental treatment leading to poor dental health. They seek care only in severe pain and so have to undergo extensive treatments.⁵ Despite improvements in anesthesia and technical

advancements along with public awareness, anxiety is still a major problem.⁶ This is evident from the high levels of pre-operative anxiety in local population (62%-73% females and 42% males).⁷ Several factors contribute towards high levels of dental anxiety including gender, age, rural or urban living, level of education, socio-economic status and earlier traumatic dental experiences.⁸ However, pain is the most important feared factor. Thus, reassurance and adequate pain control have a key role in relieving anxiety. This reassurance should start at the time of booking the patient for the operation.⁹ Preoperative tailored information at the initial visit leads to less anxiety and higher satisfaction.¹⁰ Preoperative anxiety can be managed by the use of different pharmacological¹¹ and psychological methods.¹² Among these, counselling prior to surgery is an easy and cost effective method to avoid negative outcomes.^{12,13} Importance of counselling is commonly overlooked leading to increased patients' suffering and economic burden.⁴ Preoperative visit and provision of information help

to reduce the physiological parameters¹⁴ and preoperative anxiety.³ This leads to reduced perioperative complications.¹⁵ In literature review, many studies have supported the positive effect of counseling.^{12,13,16} However, a few studies could not find any beneficial effect of this intervention.^{17,18}

Methods

An interventional study / randomized control trial (RCT) was conducted in the department of maxillofacial surgery, Punjab Dental Hospital, Lahore and the department of maxillofacial surgery, Mayo Hospital, Lahore during a period of 4 months from September, 2013 to December, 2013. Using a nonprobability convenience sampling technique, 100 patients were included in the study. These patients had an age of 18 years and above who presented in the department of maxillofacial surgery for third molar extraction and were also willing to participate in the study on voluntary basis. Patients having previous experience of third molar surgery were not included. These patients were assessed for anxiety by applying Hamilton Anxiety Rating Scale (HAM-A). The patients having anxiety level above the cutoff point were selected to participate in the study in order to maintain the homogeneity of the sample. These patients were randomly divided into two groups with 50 patients in each group. Group A was the experimental and group B was the control group. The patient's demographic characteristics were recorded on a structured proforma. Pre-operative general anxiety was objectively assessed and the findings were recorded on HAM-A. Preoperative dental anxiety was marked by the patient on Corah's Dental Anxiety Scale (DAS) (Urdu version). It is a translated and adapted form of English version of Corah's Dental Anxiety Scale (DAS), which is a validated scale for the assessment of dental anxiety. Scoring was done on both scales and it was labeled as session 1 which was conducted at the time of booking the patient for surgery. Intervention in the form of detailed counselling was applied to the experimental group as a psychological intervention in an exclusive environment in a single session in addition to information provided as usual before surgery to all the patients of both the groups. On the day of surgery, pre-operative anxiety was assessed just before the operation in the previous manner and again scoring was done on the same scales and it was labeled as session

.The difference in scores before and after

intervention was documented and compared. Statistical Analysis: Data was entered in to a computer database using IBM SPSS Statistics version 20 (IBM Corporation) and was summarized as a data master sheet. The mean \pm SD (standard deviation) was calculated for quantitative variables, i.e., age and score of the both scales. Percentages were calculated for qualitative variables i.e., gender and socioeconomic status. A linear regression was used to compare the groups while taking into consideration the baseline differences. The independent sample t-test was used to compare the means of pre and post-intervention anxiety scores of both scales. A P-value ≤ 0.05 was considered as statistically significant.

Results

The age range of total sample (n=100) was 15-60 years with mean age of 30.30 ± 7.85 years. Mean age of group A (n=50) was 30.34 ± 8.00 years and that of group B (n=50) was 30.26 ± 7.79 years. There were 43 males and 57 females included in the study. The group A consisted of 22 (44%) males and 28 (56%) females while group B included 21 (42%) males and 29 (58%) females. Regarding socio-economic status group A consisted of 28 (56%) subjects from middle and 22 (44%) subjects from lower class while group B included 29 (58%) and 21 (42%) subjects from middle and lower class respectively. No subject in the study belonged to upper socio-economic group. The pre-intervention and post-intervention level of anxiety in group A was compared with group B. The effect of counselling on anxiety scores in DAS and HAM-A were determined by applying linear regression after controlling the difference of anxiety level at baseline. Beta coeff. values indicated that there was a change in anxiety scores of session 2 by 0.618 in DAS and 0.715 in HAM-A for a unit change in anxiety scores of session 1 in the experimental group (A). The results showed a positive effect of counselling in the scores of both scales. This effect was found to be statistically significant (p-value<0.05) **Table 1**. The means of pre-intervention and post-intervention anxiety scores were compared in DAS by applying independent sample t-test in both the groups. There was no significant difference between pre-intervention anxiety scores in DAS in both the groups. After intervention, there was a significant difference in DAS score between the two groups (p-value<0.05). In group A, there was a decrease in anxiety to a significant extent after intervention as compared to group B where there was an increase in anxiety just before the surgery **Table 2**. The means of pre-

were compared in HAM-A by applying independent sample t-test in both the groups. The pre-intervention anxiety score in group A was high as compared to group B. After intervention, there was a significant difference in HAM-A score between the two groups (p -value <0.05). In group A, there was a decrease in anxiety to a significant extent after intervention as compared to group B where

there was an increase in anxiety just before the surgery **Table 3**. Thus, the scores of preoperative anxiety before and after intervention were statistically analyzed and compared and it was found that preoperative anxiety was significantly decreased and increased in the experimental and the control groups respectively (p -value <0.05).

Table-1: Effect of counselling on preoperative anxiety (n=100).

Scale	Model	Beta Coff.	95% CI		P-value
			Lower	Upper	
DAS	Groups (A)	-5.739	-6.402	-5.076	0.000
	Session 1 (Pre-intervention)	0.618	0.527	0.709	0.000
HAM-A	Groups (A)	-6.020	-7.058	-4.8307	0.000
	Session 1 (Pre-intervention)	0.715	0.601	0.830	0.000

Table-2: Comparison of pre and post-intervention anxiety scores according to DAS (n=100).

Anxiety Scores	Groups	N	Mean Value	SD	P-value
Pre-intervention	A	50	12.62	3.64	0.254
	B	50	11.78	3.67	
Post Intervention	A	50	9.06	2.43	0.001
	B	50	14.28	3.12	

Table-3: Comparison of pre and post-intervention anxiety scores according to HAM-A (n=100).

Anxiety Scores	Groups	N	Mean Value	SD	P-value
Pre-intervention	A	50	13.74	5.32	0.016
	B	50	11.56	3.37	
Post Intervention	A	50	8.74	4.28	0.001
	B	50	13.20	3.84	

Discussion

The results of the current study showed that preoperative anxiety was significantly reduced in the experimental group after intervention as compared to the control group in which it was rather increased significantly in the absence of counselling. Various studies investigated the impact of providing preoperative information in relieving anxiety and found the same results. In Hong Kong, Ng et al. found that preoperative information about the recovery, intra and postoperative periods helped to decrease the anxiety of the patients.¹⁹ Spaulding, in a qualitative, observational study in Britain and indicated that the pre-operative knowledge about the expected outcome reduces anxiety.²⁰ Sjoling et al. looked for the effect of providing specific preoperative information, in an interventional

study. The treatment group was able to become active in their treatment after the specific information they received, which lead to a significant reduction in their state anxiety.²¹ This finding supported that specific information improved patient's self-care capabilities as a whole. Guo indicated a significant decrease in anxiety score in an experimental trial.¹⁶ The results are in accordance with the present study in which preoperative anxiety was increased in the control group just before the operation. It is the role of a surgeon to build a rapport and develop trust by educating and providing standard information to the patients.²² Ayaz et al. highlighted the importance of preoperative counseling and better doctor- patient communication. It has also been associated with lower levels of anxiety.¹² However, results of some of the studies are not in accordance with the findings

of the current study. In an experimental study by van Wijk and Lindeboom, the effect of standard information in an isolated consultation with an oral and maxillo-facial surgeon one week before operation was tested against the control group in which same information was given just before the extraction of third molars. No difference was found between the anxiety levels of the control and experimental groups. However, this consultation was highly appreciated by the patients.¹⁰ This finding is apparently in contrast to the results of present study but due to the appreciation from the patients, this intervention may not be regarded as ineffective. Casap et al. suggested that over detailed history and disclosure before the procedure can increase the stress levels of patients.¹⁷ However, in another study, the high information text was rated more informative by the participants, thus requiring less additional information and ultimately leading to higher satisfaction.³ Although the results of these studies are contradictory findings indicate the need for tailoring the information according to the individual's need and providing it in an appropriate format and manner,²³ which indirectly supports the findings of present study. By going through the literature, it may be concluded that managing anxiety is still a challenge in oral and maxillo-facial surgery all over the world irrespective of the technical, pharmacological and

surgical advances. Dental patients are mostly operated under local anesthesia. Therefore, they are usually active during surgery and recovery to a large extent depends upon their level of relaxation during the procedure.²⁴ It has been observed that pre-anesthetic assessment reduces preoperative anxiety.²⁵ The situation becomes more complicated in this part of the world due to lack of awareness. In general, stress reducing and anxiolytic perioperative psychological techniques are of considerable value both for the patient as well as for the surgeon. This is more relevant to our culture where there are many myths and misconceptions about the use of anxiolytic medicines. It may be said that preoperative counselling of the patients improves quality of care. As only a few studies have been conducted on this very important aspect in local population, it needs further research.

Conclusion

In routine dental practice, surgeons are so busy that they overlook the importance of preoperative counselling which may result in increased patients' suffering and economic burden. The current study has highlighted the importance of this simple behavioral intervention which was found to be highly effective if delivered in an appropriate format and sensitive manner.

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Picture Quiz

Q: What is the name given to this pathology?



See Answer on Page # 138