

Attitude and Practice toward Delivering of Verbal Postoperative Instructions by Undergraduates and Trainees: A Descriptive Study

¹Aisha Wali, ²Talha M Siddiqui, ³Aisha Shamim, ⁴Tabassum Majeed, ⁵Miran Khan

ABSTRACT

Introduction: Dentists' knowledge and attitudes toward oral health concern provides the structure for their professional work and should be able to convey evidence-based knowledge of oral healthcare to the community. The delivery of safe and appropriate care and instructions to patients is of prime importance to dental professionals.

Materials and methods: A cross-sectional study was conducted for analysis of attitude and practice toward delivering of postoperative instructions by undergraduates and trainees. A cluster sampling technique was used and 220 forms were distributed in five dental institutes of Karachi. Two hundred forms were fully filled and returned. Students of final year and house surgeons were included in the study. Data were statistically analyzed for frequencies and percentages with Chi-square test using SPSS version 19.

Results: The result of the present study reported that 124 (62%) of the respondents informed the patients that how long the anesthesia will last and numbing wears off. One hundred and eleven (55.5%) of the respondents delivered verbal postoperative instructions after amalgam restoration and 127 (63.5%) after composite restorations. One hundred and thirty-one (65.5%) of the respondents informed patients about temporary filling materials. One hundred and twenty-two (61%) of the respondents delivered the verbal instructions after placing a post or doing core build-ups. Ninety-nine (49.5%) of the respondents verbally explained the importance of full coverage crown.

Conclusion: The present study concluded that majority of the students and trainees are lacking in uttering the required postoperative instructions after restorative treatment.

Keywords: Local anesthesia, Postoperative instructions, Postoperative sensitivity.

How to cite this article: Wali A, Siddiqui TM, Shamim A, Majeed T, Khan M. Attitude and Practice toward Delivering of Verbal Postoperative Instructions by Undergraduates and Trainees: A Descriptive Study. *World J Dent* 2015;6(2):71-76.

Source of support: Nil

Conflict of interest: None

¹Senior Lecturer, ²Associate Professor, ³⁻⁵House Surgeon

¹⁻⁵Department of Operative Dentistry, Baqai Dental College Baqai Medical University, Karachi, Pakistan

Corresponding Author: Aisha Wali, Senior Lecturer, Department of Operative Dentistry, Baqai Dental College, Baqai Medical University, Karachi, Pakistan, Phone: 03002248518, e-mail: aishawali@hotmail.com

INTRODUCTION

Dentists' knowledge and attitudes toward oral health concern provides the structure for their professional work and should be able to convey evidence-based knowledge of oral healthcare to the community.¹ Appropriate utilization of dental care services is still dubious in most of the developing nations.² The delivery of safe and appropriate care and instructions to patients is of prime importance to dental professionals.³ Both the dentist and the staff exert a fundamental role in instructing and motivating the patients to perform a frequent and effectiveness oral hygiene.⁴ Garcia et al⁵ created an education and motivation program in which the patients were periodically instructed on the necessity of periodic recalls to maintain the good oral health achieved. A patient's satisfaction is depended on the likelihood of choosing a dentist, making and keeping dental appointments, and complying with dentists postoperative care and instructions.⁶⁻¹⁰ Researchers from many studies have assessed patients satisfaction with the preventive care received in dental clinics; the generalizability of findings from that dental settings to other practice settings may be questionable.^{7,10-13} Therefore, there is little information provided about satisfaction with dental care among patients who received set of dental treatment.^{14,15} Adequate patient education delivered after dental treatment demonstrated to improve patient satisfaction and decrease postoperative complains.^{16,17} Such education includes delivery of postoperative instructions, medication instructions and advise on home care. Postoperative instructions can be given in verbal and/or written forms.¹⁸ While the relative benefit of verbal or written instructions have not been clearly established.^{16,18} Previous comparisons of the relative efficacy of the various forms of postoperative instructions reported were common in the medical, pharmaceutical and nursing literature but the dental reports are rare.¹⁹

The purpose of the present study was to assess the attitude and practice toward delivering of verbal postoperative instructions by undergraduates and trainees.

MATERIALS AND METHODS

A cross-sectional study was conducted for analysis of attitude and practice toward delivering of postoperative

instructions by undergraduates and trainees. The study was conducted in the month of January 2014 to March 2014 in the Department of Operative Dentistry, Baqai Dental College and was approved by the Ethical Committee, Baqai Medical University. A cluster sampling technique was used and 220 forms were distributed in five dental

institutes of Karachi. Two hundred forms were fully filled and returned (Annexure 1) showed the structured questionnaire based on 10 questions related to verbal instructions given after local anesthesia, composite and amalgam restorations, composite build-ups, temporary restorations, sensitivity to hot and cold liquids and oral

Annexure 1: Survey form for delivering of postoperative instructions

<p>1. Do you make sure that the patient is aware of how long the anesthesia will last and by when the numbing will wear off?</p> <ul style="list-style-type: none"> • Always • Usually • Rarely • Never
<p>2. Do you inform your patient that sensitivity to cold is common following a dental restoration and may last several days depending on how deep the cavity penetrated the tooth?</p> <ul style="list-style-type: none"> • Always • Usually • Rarely • Never
<p>3. Do you inform your patient after placing the Cavit that it is a temporary filling and may come out?</p> <ul style="list-style-type: none"> • Always • Usually • Rarely • Never
<p>4. Do you ask your patient to get the temporary filling replaced if the filling comes out between visits, leaving the tooth unfilled will lead to infection?</p> <ul style="list-style-type: none"> • Always • Usually • Rarely • Never
<p>5. During root canal treatment, the tooth become brittle and prone to fracture, do you instruct your patient to eat from the other side, and avoid hard, sticky foods and get full coverage crown restoration?</p> <ul style="list-style-type: none"> • Always • Usually • Rarely • Never
<p>6. Do you demonstrate the brushing and flossing techniques after placing the porcelain veneers and crowns?</p> <ul style="list-style-type: none"> • Always • Usually • Rarely • Never
<p>7. Do you make sure that your patient is aware that speaking and chewing with anterior bridges needs practice?</p> <ul style="list-style-type: none"> • Always • Usually • Rarely • Never
<p>8. After placing a post or an anterior build-up, do you ask your patient to avoid biting hard food like corn or sugarcane?</p> <ul style="list-style-type: none"> • Always • Usually • Rarely • Never
<p>9. Do you ask your patient to terminate smoking for 24 to 48 hours after scaling and root planing?</p> <ul style="list-style-type: none"> • Always • Usually • Rarely • Never
<p>10. Do you explain the importance of follow-ups and maintenance of oral hygiene to the patients?</p> <ul style="list-style-type: none"> • Always • Usually • Rarely • Never



hygiene instructions. Students of final year and house surgeons were included in the study and the dental students of 1st, 2nd and 3rd year, graduates with more than 1 year of clinical experiences were excluded from the study. Data were statistically analyzed for frequencies and percentages with Chi-square test using SPSS version 19.

RESULTS

The result of the present study reported that 124 (62%) of the respondents informed the patients that how long the anesthesia will last and numbing wears off. Table 1 shows frequency of the respondents giving verbal instructions about the awareness of anesthesia numbness and postoperative sensitivity after restoration. One hundred and eleven (55.5%) of the respondents delivered verbal postoperative instructions after amalgam restoration and 127 (63.5 %) after composite restorations Table 2 shows frequency of respondents giving verbal instructions after amalgam and composite restorations. One hundred and thirty-one (65.5%) of the respondents informed patients about temporary filling materials. Table 3 shows frequency of respondents to instruct the patient after temporary restorations. One hundred and twenty-two (61%) of the respondents delivered the verbal instructions after placing a post or doing core build-ups. Ninety-nine (49.5%) of the respondents verbally explained the importance of full coverage crown. Table 4 shows frequency of respondents giving instructions after core build-ups and crown placement.

DISCUSSION

The study emphasized on the overall mode of practice among students of final year students and trainees in relation to the postoperative instructions after a restorative treatment. Since the aim of the study was to assess the frequency of respondents delivering the postoperative instructions after composite restorations, amalgam restoration, post and core build-ups, porcelain crowns and veneers. The result of the present study reported that a majority of final year students and trainees lacked the basic education regarding postoperative instructions after the restorative treatments. Up till now, no study on attitude and practice toward delivering of verbal postoperative instructions by undergraduates and trainees has been carried out, the nature and frequency of following the right pattern is unknown.

Local anesthesia administered by the infiltration route is considered to be highly effective in producing clinical anesthesia in normal tissue.²⁰ Although nerve-block injections are more technically difficult, and, therefore, somewhat less predictable than infiltration injections.²¹⁻²⁷ However, regardless of the type of local anesthetic used, postoperative soft-tissue anesthesia may lasts for several hours.^{28,29} Following a dental appointment requiring local anesthesia of the lower teeth, patient may inadvertently bite the lower lip out associated with the unfamiliar sensation of being numb or because no pain is felt.^{30,31} One hundred and twenty-four (62%) of the respondents always delivered postoperative verbal instructions about the duration of local anesthesia wearing off and

Table 1: Frequency of the respondents giving verbal instructions about the awareness of anesthesia numbness and postoperative sensitivity after restoration

Questionnaire	Always	Usually	Rarely	Never
Do you make sure that the patient is aware of how long the anesthesia will last and by when the numbing will wear off?	124 (62%)	74 (37%)	2 (1%)	0 (0%)
Do you inform your patient that sensitivity to cold is common following a dental restoration and may last few days depending on how deep the cavity penetrated the tooth?	128 (64%)	70 (35%)	2 (1%)	0 (0%)
Do you explain the importance of follow-ups and maintenance of oral hygiene to the patients?	79 (39.5%)	77 (38.5%)	42 (21%)	2 (1%)

Table 2: Frequency of respondents giving verbal instructions after amalgam and composite restorations

	Always	Usually	Rarely	Never
Do you instruct your patient after a composite restoration to avoid water and fizzy drinks for next 4 hours?	127 (63.%)	72 (36%)	1 (0.5%)	0 (0%)
Do you instruct your patient not to use the quadrant restored with amalgam for almost 24 hours?	111 (55.5%)	88 (44%)	1 (0.5%)	0 (0%)

Table 3: Frequency of respondents to instruct the patient after temporary restoration

	<i>Always</i>	<i>Usually</i>	<i>Rarely</i>	<i>Never</i>
Do you inform your patient after placing Cavit that it is a temporary filling and may come out?	126 (63%)	72 (32%)	2 (1%)	0 (0%)
Do you ask your patient to get the temporary filling replaced if the filling comes out between visits, leaving the tooth unfilled will lead to infection?	131 (65.5%)	62 (31%)	7 (3.5%)	0 (0%)

Table 4: Frequency of respondents giving instructions after core build-ups and crown placement

	<i>Always</i>	<i>Usually</i>	<i>Rarely</i>
After placing a post or an anterior build-up, do you ask your patient to avoid biting hard food like corn or sugarcane?	122 (61%)	78 (39%)	0 (0%)
During RCT, the tooth become brittle and prone to fracture, do you instruct your patient to eat from the other side, and avoid hard, sticky food and get full coverage crown restorations?	99 (49.5%)	101 (50.5%)	0 (0%)
Do you demonstrate brushing and flossing technique after placing a porcelain crown?	120 (60%)	79 (39.5%)	1 (0.5%)

numbness lasting followed by 74 (37%) usually and 2 (1%) of the respondents rarely delivered instructions.

Postoperative sensitivity after tooth-colored composite restoration remains a challenge and was reported in several studies to be up to one-third of the study sample.³² Despite of great advancements in technology of materials and adhesive systems, postoperative sensitivity occurred if the dental practitioner is not aware of both the placement and bonding technique required in direct composite restorations.³³ Persistent postoperative sensitivity after composite placement may track the following mechanism of action of polymerization shrinkage that forms a gap under the restoration, which is filled with dentinal fluid within the first 24 to 36 hours. When a particular tooth is subjected to either hot or cold stimulus, fluid contraction and expansion in occurred in the gaps, which causes fluid movement within the dentinal tubules that leads to postoperative sensitivity.³⁴ One hundred and twenty-seven (63.5%) of the respondents always delivered instructions for postoperative sensitivity that water and fizzy drinks should be avoided for 4 hours after a composite restoration, followed by 72 (36%) usually and 1 (0.5%) rarely.

Postoperative sensitivity following the routine placement of an amalgam restoration continues to be an erratic problem in restorative dentistry.³⁵⁻³⁷ It is usually encountered during the first few days following placement of the restoration,³⁸ One hundred and eleven (55.5%) of the respondents always delivered the instructions about not using amalgam restored quadrant for almost 24 hours after an amalgam restoration, 88(44%) usually and 1 (0.5%) of the respondents rarely delivered instructions for

postoperative sensitivity. One hundred and twenty-eight (64%) of the respondents delivered verbally that sensitivity to cold following restorations is common and may last few days depending on the depth of the cavity. Fahad U et al in 2010 conducted a research that concluded that restorations placed with the soft start curing technique reduces sensitivity.³⁹

Temporary fillings done in root canal treatment or before completion of the final restorations, they provide a barrier against salivary contamination of the root canal. Intermediate restorative material (IRM) and Cavit are commonly used as temporary filling materials.⁴⁰ Intermediate restorative material, that is used due to its high compressive strength,⁴¹ has been demonstrated in bacterial leakage to be less leak proof than Cavit.^{42,43} Cavit is a temporary filling material that is placed to save the unfilled tooth from infection, only 126 (63%) of the respondents informed verbally that it is a temporary filling material and may gets dislodged, 72 (36%) of the respondents usually instructed their patients. One hundred and thirty-one (65.5%) of the respondents always verbally instructed their patients to get the temporary filling done again if it gets dislodged, whereas 62 (31%) of the respondents usually delivered instructions to their patients.

A core build-up is a restoration placed in badly broken down tooth to restore the bulk of the coronal portion of the tooth in order to facilitate subsequent restoration by means of an indirect extracoronal restoration.^{44,45} Compressive and tensile strength of core materials is thought to be important because core usually replace a large bulk of tooth structure and must resist multidirectional forces



for many years.^{46,47} One hundred and twenty-two (61%) of the respondents always delivered postoperative instructions that patients should refrain from biting hard food like sugarcane or corn after placing an anterior post or build-up. Seventy-eight (39%) usually instructed about avoidance to bite hard object.

The long life of endodontically involved teeth has been greatly improved by continuous advancements in endodontic therapy and restorative procedures. It has been reported that a large number of endodontically treated teeth are restored to their original function.⁴⁸ Ninety-nine (49.5%) of the respondents always verbally explained the importance of full coverage crown after root canal treatment, the tooth becomes brittle and prone to fracture, whereas 101 (50.5%) of the respondents usually instructed their patients to get full coverage crown done.

Regarding improvements in oral hygiene maintenance in a mouth with rapidly progressing caries or periodontal diseases there is obviously no point in arguing upon a complex course of treatment involving crowns. The first priority must be to stop the cause and arrest the disease process and improve the oral hygiene. Although every effort should be made by both dental practitioner and patient to improve bad oral hygiene, there are those who are simply not able to improve, but who are nevertheless fortunate in having a slow rate of progress of periodontal disease and a low caries incidence, and for these patients crowns are often justified.⁴⁸ Seventy-nine (39.5%) demonstrated the brushing and flossing techniques along with the importance of follow-ups and oral hygiene maintenance.

The findings of the study explained the need of educational interventions during undergraduate studies and the trainees should be kept a check and supervised during and after the restorations. They should follow the protocols and plan the treatment accordingly in order to avoid any treatment failure and should make sure that they deliver postoperative instructions verbally as well as written to save the patient from any postoperative complains.⁴⁹⁻⁵¹

CONCLUSION

The present study concluded that majority of the students and trainees are lacking in uttering the required postoperative instructions after restorative treatment. It is likely that the better postoperative instructions delivered the better will be the postoperative care and lesser are the chances of postoperative complains and failures.

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