

Vitality of Radiograph Overlooked – A Survey among Clinical Practitioners

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Abstract:

➤ Aim:

The aim of the study was to assess the vitality and awareness of radiograph among dental clinical practitioners.

➤ Materials and Methods:

A cross sectional study was conducted among 60 dental patients, in that study 30 male patients and 30 female patients. A self comprehensive questionnaires were given to the patient during their dental visits.

➤ Results:

Among 60 dental practitioners 90% are aware of the importance of radiographs. 83% of participants follow all the precautionary measures while taking a radiograph. 25% of participants are likely to proceed radiographic abnormalities without specialist opinion. And 48% advises to charge the cost of radiographs as a part of treatment protocol.

➤ Conclusion:

The survey shows that majority of the practitioners are aware of the importance of radiographs and precautionary measures while taking radiograph

Keywords:- Radiography, X-Ray, OPG, IOPA, Prosthesis

I. INTRODUCTION

Radiography is a procedure used both clinically and industrially to obtain information non-destructively about the internal structure of any object. X-ray is the most predominantly used radiation. Radiographic examination is one of the essential aids to discover, to locate, to define, to classify and to confirm any abnormalities. In dentistry, radiograph enables the professional to identify many conditions that may otherwise undetected clinically.^[7] Despite of its importance, many dentists simply overlook the necessity of this diagnostic aid and continue with their treatment, especially while planning a definitive prosthesis. This survey is to assess the practicality of radiograph and its negligence among clinical practitioners in dentistry.

II. MATERIALS AND METHODS

The survey was conducted among undergraduate dental practitioners in and around Chennai. The purpose of the study was described and questionnaires were prepared on the basis of the knowledge about vitality of radiographs in dental practice. The participants expressed their level of perception by choosing an option provided for each question and were assured that the information provided by them is kept confidential.

III. RESULTS

90% of the participants are aware of the importance of radiographs. Three fourth admits that radiographs play an important role in the longevity of the prosthesis. And the same ratio of the participants considers taking radiograph for all types of fixed prosthesis, preferably either OPG or IOPA. Both clinical and radiographic examination is being suggested for analysing PDL conditions of the abutments during the treatment and also for follow up assessment by almost 45% of the participants

Based on our study, 83% of participants follow all the precautionary measures while taking a radiograph. Majority of practitioners states that they screen regularly to assess radiographic exposure but the prevalence of safety limit knowledge seems to be comparatively less among certain practitioners.

In clinical practice, majority of the participants prefers to explain the importance of radiograph with relation to treatment plan to their patients and then proceeds with the treatment rather than leaving it to the patient's choice completely.

Responses show that around 25% of participants are likely to proceed radiographic abnormalities without specialist opinion. And 48% advises to charge the cost of radiographs as a part of treatment protocol.

Surprisingly some practitioners have opted to continue endodontic management for accidental pulp exposure cases without prior radiograph. But still most of the practitioners accepted the fact that there are conditions showing only radiographic features without any clinical signs which highlights the importance of radiograph.

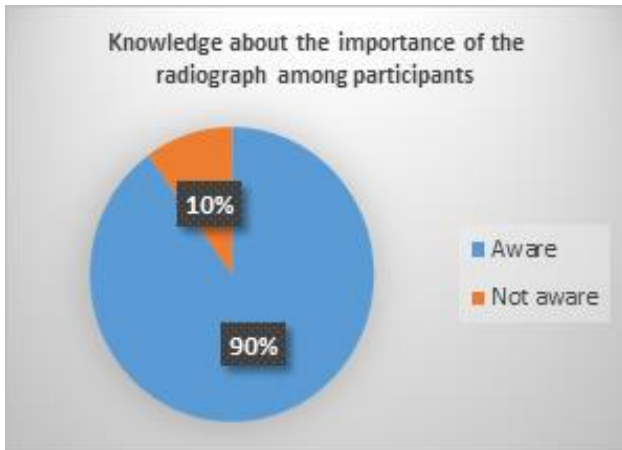


Fig 1:- Based on participants' response to the questionnaire

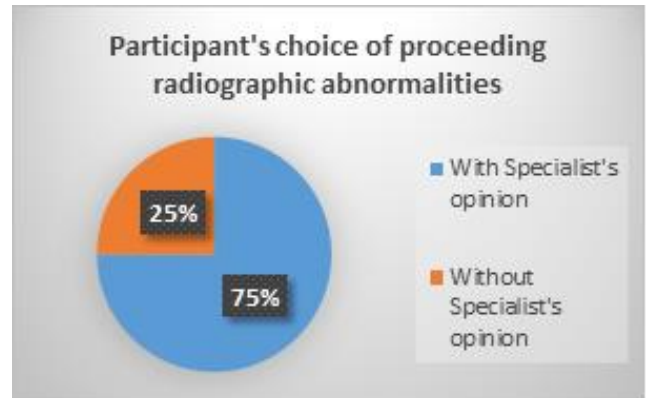


Fig 4:- Based on participants' response to the questionnaire

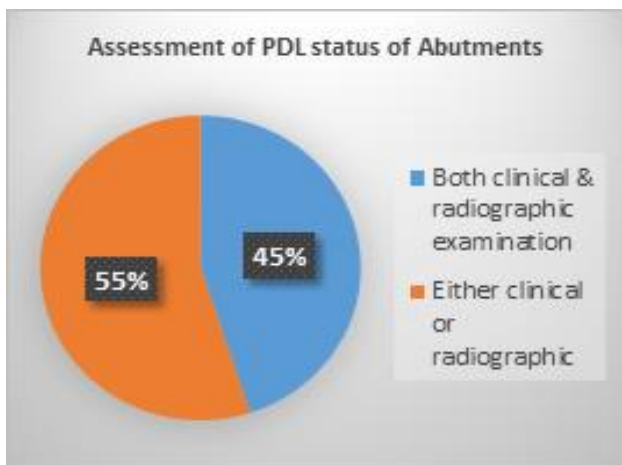


Fig 2:- Based on participants' response to the questionnaire

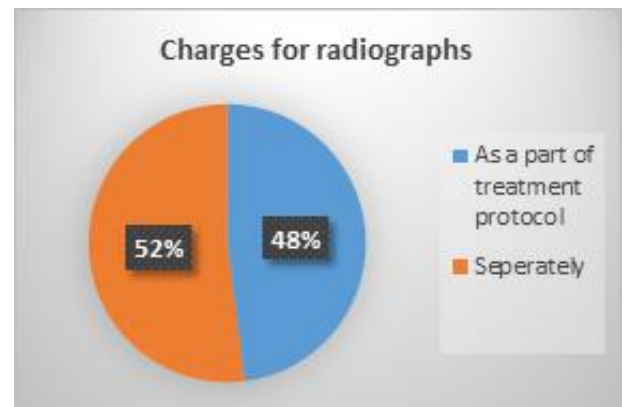


Fig 5:- Based on participants' response to the questionnaire



Fig 3:- Based on participants' response to the questionnaire

IV. DISCUSSION

Theoretically more knowledge regarding radiographs had been acquired by practitioners yet ignorance clinically of application of the same is noted. The survey was designed to assess the knowledge about the practicality of x-rays in young dental practitioners.

The purpose of radiographs less in the detection of underlying hard tissue related defects. There are certain dental conditions such as taurodontism, occult caries that are clinically undetected which can be assessed only using radiography.^[7] Such teeth may be clinically sound yet can act as practical difficulty. The use of radiographs for the detection of these defects are overlooked by fewer practitioners. This may be due to the non availability of radiographic equipment or ignorance to these defects.

Considering the safety of the practitioner as well as the patient undergoing radiographic procedures the precautionary measures involving use of protective aprons equipped with thyroid collars and gonad pads for the practitioners and patients and standing behind the protective shield while exposing rays are to be employed.^[2] All these precautions are well followed by all most all the practitioners except a relatively less number tends to avoid patient's safety aprons and gonad pads.^[9] This may be due to the low economical stand or ignorance A very low number has denied the use of protective shield ,this may be because of the use of chairside radiation equipment.

An individual practitioner must undergo radiation exposure screening at least once in a year, the safety limit being 10-20mSv/year.^[2] There is a small population who ought to undergo the proper screening once or twice a year yet are unaware of the safety limit.

Assessment of the PDL stability and defects as well as follow up should be done clinically and radiographically.^[1] Almost half of the participants tends to follow this practice and agrees that use of radiographs help in the longevity of the prosthesis. A comparatively less number of participants follow only either of the two examinations, which can be indicative of unavailability of radiographic unit or ignorance of the consequences.

Despite proceeding with a mandatory radiography or leaving the choice to the patient's consent, it would be always beneficial to have a discussion regarding the treatment plan to the patient and then proceeding with a radiographs. It can ensure a better doctor-patient relationship and also in dealing with legal complications.^[8] A majority of the practitioners have ensured that they follow the same procedure. Yet a small portion of the participants tend to take a mandatory radiography, such a practice may be to avoid risk taking or to have a compulsory lookout on the PDL status or any other defects.^[1]

It would be undesirable to encounter mishappening like accidental pulp exposure while preparing an abutment teeth.^[6] This usually happens due to proceeding a case without prior radiography. Half of the participants have assured that they would not proceed a case without prior radiographs and are less likely to encounter such issues. But the other half has responded to deal with endodontic treatment in these circumstances. This is indicative of negligence of use of radiography prior to a case. This may be due to unavailability of radiographic equipment in the clinics.

It is suggested to get a specialist opinion if the radiographic anomalies are detected in a patient. Most of the practitioners tends to follow this right, yet a minor part tends to occasionally opt for specialist's opinion which is suggestive of rare use of radiography prior to a case. In a certain minority, they have opted to assess of their own also

V. CONCLUSION

The survey shows that majority of the practitioners are aware of the importance of radiographs and precautionary measures while taking radiograph. But there revolves a minor ignorance among many practitioners for employing prior radiographs especially in FPD. Hence prior radiograph has to be made mandatory and more knowledge has to be acquired by every young practitioners which would avoid iatrogenic effects. Eventually failure of prosthesis can be grossly minimized. Still further studies has to be done regarding this aspect.

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