

COMMON CRITERIA FOLLOWED BY DENTISTS FOR EXTRACTION OF PERIODONTICALLY WEAKENED TEETH

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ABSTRACT

Many a times, a situation arises where the dentist/ prosthodontist has to make a decision of extracting periodontically weakened teeth before making a final treatment plan for rehabilitating the patient. The purpose of this study is to understand the different criteria followed by dentists to indicate teeth with periodontitis for extraction. A questionnaire was formatted and distributed to 200 dentists in colleges and private clinics. The criteria for evaluation included a) tooth mobility b) loss of tooth attachment (c) furcation involvement (d) perio- endo lesions (e) referral to a periodontist for evaluation (f) radiographic bone loss greater than 50% (g) socio- economic status of the patient (h) prosthodontic planning. It was found that the most commonly used criteria was the presence of mobility (41%) followed by severity of bone loss (24.5%) and radiographic evaluation of bone loss (22.1%). The study pointed out the variability of the criteria of different operators and the need for combined treatment planning and prognosis from multi specialities i.e periodontics, prosthodontics and endodontics.

KEY WORDS: Periodontitis, Extraction criteria.

INTRODUCTION

Periodontal diseases are widespread among the general population¹. It has been observed that the patients undergoing maintenance phase after periodontal therapy have less possibility of tooth loss. But in some situations, previous negligence on part of the patient, severe attachment loss may not bring these teeth in total health and function. In such cases, extraction of these teeth is advised.

Prognosis is based on the diagnosis and therapeutic possibilities according to the duration, evolution and resolution of the disease². Factors influencing the prognosis are type and degree of bone loss, probing depth, attachment loss, presence and severity of furcation involvement, crown-root relationship, mobility, root anatomy, position and occlusal relationship of the tooth, pulp involvement, type of rehabilitation to be adopted, strategic value of the tooth, in addition to factors related to the patient, such as age, systemic status, oral hygiene, other risk factors and the possibility to change them, financial aspects, parafunctional habits and follow-up intervals^{3,4,5,6}. The decision of treatment plan again depends on several factors such as technical-scientific knowledge, experience,

tradition, beliefs and habits. All these factors are responsible for a great disparity among dentists to decide between treating the periodontically compromised teeth or indicating its extraction⁷.

Hence it was decided to undertake a study for understanding the adoption of different criteria for determining the indication of extraction of periodontically compromised teeth.

Materials and methods

Data was collected by means of interview with around 200 qualified dentists (graduate and post-graduate) of two dental colleges and private practitioners of the city.

Before the interview, the study subjects were informed on the objectives of the study and the privacy of data. Then, the dentists willing to participate in the study signed an informed consent form. A pilot study was conducted on 10 dentists to evaluate the questions asked in the interviews and the time required for the procedure. Information obtained from these interviews was used to adjust and modify the questions.

The alternatives related to the criteria for extraction of periodontically weakened teeth were as follows :

a) tooth mobility b) loss of tooth attachment (c) furcation involvement (d) perio- endo lesions (e) referral to a periodontist for evaluation (f) radiographic bone loss greater than 50% (g) socio-economic status of the patient (h) prosthodontic planning (i) if others, please specify.

The use of the most related parameters was tested among these strata by chi-square test. The level of significance was set at 5%.

Results

30% of the dentists informed that they usually refer their patient to the periodontist for his expert opinion on extraction of the teeth.

The most common criteria for extraction of periodontically weakened teeth were as follows:

1. presence of mobility (41%)
2. severity of bone loss (24.5%)
3. radiographic evaluation of bone loss (22.1%)
4. prosthodontic based treatment plan (19%)
5. furcation involvement (5%)
6. socioeconomic and cultural aspects (4.7%)
7. presence of extensive caries (2.3%)
8. possibility of systemic involvement due to periodontitis (2.1%)
9. Perio- endo lesions (1.8%)

Discussion

The present study was to determine the priority based decision making analysis of the dentist for indication of extraction of periodontically weak teeth. The study was not meant to determine the prognosis, future loss of attachment because there are many other variables associated with the same⁸. The presence of risk factors, evaluation of susceptibility, as well as factors that affect the prognosis, should be considered in clinical decision-making involving the indication for extraction⁹. In some cases, the severity of destruction of periodontal tissues does not provide conditions for healing; thus, tooth extraction should be indicated. The present study showed that the dentists prefer referring severe cases of periodontitis for treatment and indication of extraction. Many studies have shown that even doubtful prognosis cases have better future for the teeth after the initiation of periodontal treatment¹⁰. Tooth mobility, severity of attachment loss and radiographic bone loss greater than 50%, in this order, were the most frequently followed criteria to indicate the extraction of periodontally affected teeth. These criteria indicate

the severity of disease, as well as its sequelae after treatment.

Mobility of the teeth will not be a determining factor as it may be reduced by decrease in inflammatory infiltrate leading to stability of teeth¹¹. Radiographs are helpful in determining the diagnosis and prognosis along with determination of other pathologies, bone crest level, and crown –root ratio¹². The above criteria are consequences of past periodontal disease and destruction. The severity of attachment loss does not indicate the activity of disease upon examination. This may only be determined by the presence of clinical attachment loss or radiographic bone loss evaluated in 2 examinations at different moments. The presence of clinical inflammatory signs such as edema, erythema, bleeding and suppuration indicate the inflammatory status and, if considered separately, are weak predictors of future attachment loss.

Prosthodontic treatment planning is also a criteria for indication of extraction. At times, weak abutments can fail the best designed prosthesis and sometimes even teeth with weak periodontal support are helpful in giving support to the prosthesis¹³.

Furcation involvement per se is currently not considered a determining factor in prognosis of a case. Endo perio lesions' prognosis depends on the origin of the lesion and the speed of healing.

Socio-economic and cultural aspects determine the willingness of the patient to undergo a particular dental therapy¹⁴. The patient has to be also made aware of the different treatment possibilities to solve his dental problems.

Biological status and presence of risk factors should also be considered for prognosis apart from anatomical criteria.

CONCLUSION

Most of the cases were referred to the periodontist as variable criteria for prognosis prevailed among the general dentists. Past disease status reflected the indication for extraction. Dentists still require more specific and reliable methods to establish prognosis and preserve teeth.

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