

Assessment of the need for dental prosthesis at Bamako University Hospital (CHU-OS)

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ABSTRACT: The dental prosthesis is defined as an artificial device intended to replace the missing tooth or teeth and the related tissues. Clinical reality places us in front of an infinite dental edentation situation. For the rehabilitation of missing teeth, it is often necessary to manage simultaneously the use of all prosthetic techniques: partial and total prosthesis, fixed prosthesis and implantology.

The aim of this investigation is to evaluate dental prosthesis needs in the University Hospital of Odonto-Stomatology of Bamako (CHUOS).

A survey was conducted at Bamako University Hospital over a period of one month. The study included 400 patients who consulted for making dental prosthesis. Patients with 1-4 teeth to replace in the maxillar represented 30, 1% of cases and 30,7% in the mandible. The results showed the highest rate concerning partial removable denture prosthesis preference (83%) in comparison with fixed prosthesis which represented only 8, 75% of cases. Also, the partial removable prosthesis was diagnosed in 52,25% of cases.

Edentation can be the cause of several problems in the oral cavity, hence the need to sensitize the population of the importance of oral health and the importance of wearing the prosthesis in case of losing teeth.

KEYWORDS: Edentation, Dental Prosthesis, Removable, Partial, Total.

1 INTRODUCTION

The World Health Organization defines health as a complete state of physical, mental and social well-being, and not just an absence of disease or infirmity [8].

The dental prosthesis is defined as an artificial device intended to replace the missing tooth or teeth and the related tissues.

Late consultation in dentistry often results in dental avulsion. It is due to negligence, but also limited access to dental care in many developing countries.

In the United States, the need for uni- or bimaxillary total prosthesis was 16% in 2000.

The national survey on the prevalence of oral diseases in Benin, conducted in December 1994, revealed that 53.5% of Beninese adults require prosthetic treatment (dental prostheses) [26].

Thus, despite considerable progress in treating caries and periodontal disease, tooth loss remains an unresolved problem.

The different specialties in odontology are intended for the preservation of the dental organ and its supporting tissues. The aesthetic is not forgotten so far. Clinical reality places us in front of an infinite situation of dental edentation. For the rehabilitation of tooth edentas, it is often necessary to manage simultaneously the use of all prosthetic techniques: partial and total prosthesis, fixed prosthesis and implantology.

We proposed to carry out a cross-sectional survey at the University Hospital of Odonto-Stomatology (CHUOS) of Bamako

The aim of this study was to:

- Evaluate dental prosthesis needs in the University Hospital of Odonto-Stomatology of Bamako (CHUOS) and sensitize students on these problems of dental prosthesis needs.
- Determine the frequency of development of the dental prosthesis according to certain sociodemographic variables and clinical characteristics;
- Determine the frequency of dental mobility;
- Determine the oral state;
- Determine the wearing habit and need for prosthesis;
- Find a statistical link between certain variables.

2 METHODS

In order to evaluate dental prosthesis needs in the University Hospital of Odonto-Stomatology of Bamako, a prospective and descriptive study involving 400 patients was conducted from 10 April 2014 to 10 May 2014.

The Recruitment of the patients was accidental or on the recommendation of a third party. The study included any patient who consulted for fabrication of dental prosthesis, older than 14 years old and accepted the conditions of the follow-up. And was excluded from the study any patient consulted for any other cause apart from those mentioned, and patients over 80 years old.

Data analysis was performed with NPSS software 22 (French version). Statistical calculations were performed with Pearson χ^2 with alpha risk ($\alpha \leq 0.05\%$).

3 RESULTS

The first part of the study interested the general characteristics of the patients. The female sex was the most represented with 60.25% of the cases, and a sex ratio of 0.65. The age group of 21-40 years was the most represented with 44.75% of cases. Concerning the ethnic group, the Bamanans were the most represented with 22.00%. Housewives accounted for 24% of the cases. For the level of education, the illiterates were the most represented with 35%.

The second part of this work was about the clinical features. Mobile teeth were observed in 7.25% of cases and dental dyschromia in 8.00% of cases. The presence of calculus was found in 48.00% and bone lesion of the oral cavity was found in 0.5% of cases.

Concerning the distribution of patient population by halitosis and sex, a significant statistical difference was noted ($p \leq 0.045$). Xerostomia was observed in 2.75% of cases. The mandible was the most affected maxillary with 53.74% of cases.

Patients with 1-4 missing teeth to be replaced at the maxillary level were the most represented with 66.91%, and patients with 1-4 teeth to replace in the mandible accounted for 77.80%. For the distribution of the effect of patients according to the type of prosthesis diagnosed, the partial removable prosthesis was the most represented with 52.25% of cases and the most chosen by patients with a percentage of 83.00%. Also, this same type of prosthesis was observed in 15.25% of cases, and the satisfaction of patients with there prosthesis was represented with 65.79%.

4 DISCUSSION

This is a prospective study focusing on the epidemiological aspect of the evaluation in need of dental prosthesis at the University Hospital of Odonto-Stomatology of Bamako (CHUOS). It concerned 400 cases during a period of one month.

Concerning the first part of the study which concerned the general characteristics of patients, the distribution according to the sex showed a predominance of women (60.3%) comparing to men (39.8%), and the sex ratio was 0.65. I. TESELEFF found 52.7% of females in his study [20].

Our study highlighted the age group of young adults (21-40) with 44.8%. P.HESCOT and AI, in their study, found 61.5% between 1993 and 1995 [29].

Housewives were the most represented with 24.00%. The Bamanans ethnic group was the most represented in our study with a rate of 22.0%. For the level of education, illiterates were represented with 35.0% of cases.

Concerning the clinical features, our study revealed the existence of 7.25% of moving teeth. Dyschromia was observed in 8.0% of cases. The presence of calculus was observed in 48.00% of cases. Philippe found 20.2% in his study [13]. The lesion element of the oral mucosa was found in 61.0% of cases. Bone damage in the oral cavity was observed in 0.5% of cases.

Ki2 validated. A significant statistical difference was noted between halitosis and sex with $p \leq 0.045$. Xerostomia was observed in 2.75% of cases. The mandible was the most concerned with 33% of cases. Patients with 1-4 teeth to replace in the maxillary represented 30.1% of cases. Patients with 1-4 teeth to replace in the mandible were observed in 30.7%.

The partial removable prosthesis was represented in 63.00% of maxillary cases and in 74.50% of mandibular cases.

The removable total and partial denture prosthesis diagnosed was represented in 52.25% of cases.

The partial removable prosthesis was chosen in 83.00% of cases, and worn in 15.25% of cases.

The worn and satisfactory prosthesis was represented in 65.79%.

5 CONCLUSION

Our prospective study took place from 10 April to 10 May 2014 at the University Hospital of Odonto-Stomatology of Bamako (CHUOS).

The evaluation showed descriptively the predominance of the female sex with 60.25% of the cases.

Young adults (21-40 years old) were the most concerned with 44.75% of cases. Patients with 1-4 missing teeth accounted for the majority of cases with 66.91%. The mandible was the maxillary most affected with 53.74% of cases. The partial denture prosthesis was the most diagnosed type of prosthesis with 52.25%, the most preferred type of prosthesis with 83.00% and the most worn prosthesis by patients with 74.39% of cases. It was also the most satisfactory type of prosthesis with a percentage of 77.80% of cases.

RECOMMENDATIONS

A. TO THE POLITICO-ADMINISTRATIVE AUTHORITIES:

- Train students in dental surgery
- Strengthen practical teaching in the field of prosthesis
- Promote the specialization of dental surgeons in the prosthetic field by granting scholarships
- Organize awareness campaigns on the importance of dental prosthesis in the toothless
- Decrease the cost of taking care of the dental prosthesis.

B. TO HEALTH AND SOCIAL STAFF:

- Raise awareness about the importance of oral health and the consequences of toothlessness.
- Propose the port of prosthesis at all toothless patient who came for oral care
- Make the population aware of the importance of wearing the prosthesis in case of toothless.

C. TO THE POPULATION:

- Consult early for any loss of dental units
- Observe good oral hygiene.

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