

Case Report

Full mouth rehabilitation of a self-neglected natural dentition

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ABSTRACT:

Self-neglect, is a behavior disorder in which a person compromises his health. When permanent natural teeth are neglected, they undergo destruction due to caries. While the issues of parental neglect of children and elder neglect by caretakers or family members has been extensively researched, there is little attention being paid to the problem of self-neglect. We present a unique case of an adult female patient, who claimed that she had never brushed the teeth, despite claiming that her deciduous teeth were good. The patient had a chief complaint of halitosis and poor aesthetics. The debris index of the patient was in the range of 0.9. Almost all maxillary and mandibular teeth required to be endodontically treated, followed by crown lengthening procedures to gain crown height. The Major occlusal correction included cast post core build up, occlusal plane and anterior guidance correction before giving individual crowns, three fixed partial dentures and a cast partial denture. The patient was extremely happy with her rehabilitation, but at two year follow up, her oral hygiene was not as desired.

Keywords depression, human abuse, elder neglect, obesity, suicide

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INTRODUCTION

There has been a shift of health care problems in the world since last few decades. Within century, the problem of malnutrition transformed into the opposite, which is overweight and obesity [1]. Not to forget that in the last two decades of this century the world has witnessed more than 60 epidemics and a pandemic too (covid 19). We as a society also have witnessed a wide variety of social problems, the one most sensitive and common is human maltreatment which ranges from child maltreatment to elder maltreatment [2]. Human maltreatment that is most commonly seen is psychological in nature and is recognized in the scientific world as neglect (child neglect, parental neglect, elder neglect). However, there is one more neglect that has got less attention and it is called as self-neglect. It is a term that describes an adult living in such a way so as to endanger his health, safety or wellbeing [3]. Manifestations of such behavior include ignoring self-nutrition, hygiene, clothing and medical necessities [4]. Since the condition is complex in nature, it has been termed as a syndrome

when seen in elderly people [5]. While other forms of neglect like elder neglect and parental neglect of children have received recognition as a public health and criminal justice concerns [6], there is little recognition of self-neglect. Most forms of neglects have been associated with their respective environmental influences [7], since such influences are thought to be the main preventive approaches to avoid diseases that result due to neglect [8]. Self-neglect, however can be easily discerned if and when dental tissues are neglected to the extent that entire dentition is destroyed especially if it caused by dental caries [9]. Extreme cases of neglect of permanent dentition results in extensive caries, which may result in total loss of tooth structure that is present outside the alveolar bone. In such cases full mouth rehabilitation is the only way to bring back the normal masticatory function, provided patient has to will to correct his dental condition. Tooth loss or decay that is associated with full mouth rehabilitation invariably includes restoration of large defects which impair a

patient esthetically, functionally and psychologically [10]. With tooth destruction involving both external and internal structures of the tooth, it is imperative that one should have a multidisciplinary approach towards occlusal rehabilitation, especially in various phases [11]. This article presents a unique and a rare case of self-neglect of a young female patient who was successfully rehabilitated with a combination of fixed and removable prosthesis.

CLINICAL CASE REPORT

A young female patient reported to the department of maxillofacial prosthetics with chief complaint of bad odour from the oral cavity. The patient's personal history revealed that she was not working, unmarried and had studied till higher secondary school. Patients medical/drug history did not disclose any significant clinical implications. Dental history disclosed that she had never used a brush or paste and that she would clean her teeth with the water. Extra oral features included a round tapering face with a prominent chin with all other parameters in normal range. Intra oral examination revealed patients entire maxillary and mandibular teeth destroyed due to complex caries, plaque deposits and stains (Fig A1). Orthopantomogram revealed grossly decayed crown tooth structures of all teeth while the roots were healthy (Fig A2). A series of periapical films (Kodak, Care stream Heath India Pvt Ltd. Mumbai) revealed the presence of periapical pathology in relation to maxillary and mandibular anteriors (Fig A3, 4,5,6) and posteriors (Fig A7, 8,9,10). Teeth that were grossly decayed to the extent that they could not be restored were also present (Fig B1, 2,3). To devise a treatment plan with a multidisciplinary approach, a diagnostic impression was made with alginate (CA 37; Cavex, Haarlem, Holland) followed by making interocclusal records (Take 1, Kerr, Romulus, MI, USA) to program a semi adjustable articulator (Articulator #3140; Whip Mix Corp). The mounted casts revealed the extent of supra eruption and occlusal plane correction that was desired (Fig B4). After multiple deliberations, the treatment plan that was devised and found to be feasible was to undergo intentional root canal of all teeth, followed by use of cast (Remanium CSe, Dentaaurum J.P. Winkelstroeter KG, Ispringen, Germany) post core (maximum teeth) and prefabricated post core (few), individual crowns and few fixed partial dentures and a mandibular removable partial denture. The entire treatment plan was also not possible without having undergone either gingivectomy or crown lengthening procedures for both arches.



Fig.A: (1) Intra oral condition (2) Orthopantomogram showing the coronal tooth structure of whole dentition destroyed (3 to 10) Periapical x rays showing periapical condition of all teeth



Fig. B: (1) Mandibular teeth for extraction (2,3) Maxillary right and left side posteriors requiring extraction (4) Diagnostic casts mounted on a semi adjustable articulator

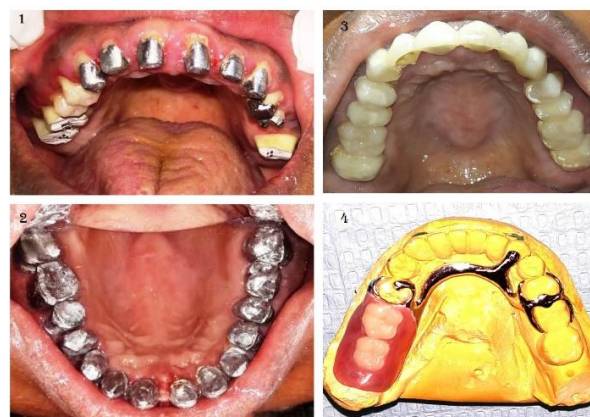


Fig. C: (1) Cast post core for maxillary arch (2) Occlusal view of maxillary metal trial (3) Temporary made from CAD/CAM (4) Mandibular cast partial denture after trial



Fig. D (1) Final restorations in maxillary arch (2) Fixed partial and removable partial denture of mandibular arch

The treatment started by diagnosis in which caries were removed and the necessity of root canal treatment was decided. After having undergone various crown lengthening procedures and intentional endodontic treatment, Prosthodontic rehabilitation started with fabrication of cast post core and prefabricated post in both maxillary (Fig C1, 2) and mandibular arches. Occlusal vertical dimensions were maintained with one molar on either side. All cast post cores were cemented using either polycarboxylate, resin or zinc phosphate cement. The temporary for both arches were fabricated using a CAD/CAM build temporary restorations (Fig C3). Once the fixed partial denture treatment was completed, the patient received a cast partial denture which was supported on surveyed crowns (Fig C4). Porcelain fused to metal restorations were then built either individually or as fixed partial dentures (Fig D1) to rehabilitate maxillary arch. The mandibular arch also was rehabilitated with porcelain fused to metal restorations along with a class 2 partial denture (Fig D2). The patient was educated and motivated throughout the treatment and was put on frequent recall. After two months' patient reported with decementation of one single crown which was recemented. The patient was happy with the outcome of the treatment, but at the 6 month follow up, it was noted that the patient was not maintaining his oral hygiene to the mark that is required after so many fixed partial dentures in the mouth.

DISCUSSION

The term neglect is actually considered as a decline in the function of ability to execute things. The present case is a feature of such act since the patient reported that she had never cleaned her teeth. It can be though argued that it is possible that her parents would be blamed for her condition, but the patient reported that as a child her teeth were in good condition. Dental neglect at the same time has been reported in children [12], who also have been found to be more vulnerable to such neglect [13]. Dental neglect in adults is rarely reported while at the same time the elder neglect has been reported immensely in medical and social science literature. It is quite possible that elders being the biggest users of the health care system [14] attract more attention than adults or children. The two forms of neglect are basically different, and it has been

stated that one should differentiate self-neglect from elder neglect because elders are dependent on caretakers for their health [15]. Most medical health organizations like world health organization or America medical association have reiterated the significance of awareness among primary health care workers to tackle elder neglect [16], but it is difficult for them to force any legislation for self-neglect. Self-neglect of natural dentition is reflected in the poor or extremely poor health through the use of debris index. When checked on this patient, the debris index was 0.9 which is significantly higher than normal values [17]. Self-neglect can occur in various forms like elder neglect [18], but there are no recognized forms of self-neglect, which should be a concern because of its potential ill effects on one's own health [19]. While child neglect has been reported to occur even in conservative nations [20], the topic of self-neglect remains unexplored despite advances in psychological sciences. Another difference is that in elder neglect, the elderly may be dying due to deprivation of food [21], but in self-neglect, one cannot assess the magnitude of such deprivation by an individual. It has also been seen that intervention in case of elder neglect is possible [22], which is not the case when it is the case of self-neglect.

The oral rehabilitation of the case presented in this article was a laborious one and was conducted in phases as described in the literature. Rehabilitation of the occlusion was significant since the relationship between ideal occlusion and temporomandibular joint had to be reestablished [23], [24]. Use of cast post cores was necessary since they provide a customized approach to designing one's new occlusion in the presence of malaligned, malpositioned teeth [25], [26]. Three things define the full mouth rehabilitation of this case, namely the occlusal plane was required to be corrected, the anterior guidance had to be reestablished and vertical dimensions were still maintained. Whenever an occlusal plane is violated by supraerupted teeth, the role of anterior guidance diminishes, since the occlusal plane is an average of inclination of all teeth [27], change in position of teeth alters the role of the tooth and interferes with temporomandibular joint function.

CONCLUSION

Self-neglect is a social human issue that requires more attention from researchers. It is imperative to know why one neglects oneself, only then we may be in a position to understand why parents neglect children and why children neglect elders. Self-neglect of oral cavity leads to destruction of the teeth and could be the first sign of such behavioral disorder. If and when permanent teeth are destroyed, there are few solutions, especially if a patient is medically compromised.

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CONFLICT OF INTEREST

There are no conflicts of interest to declare by any of the authors of this study.

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