

Restorative Rehabilitation of Tooth Wear: A Clinical Case Report

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Received - 22 November 2018

Initial Review – 05 December 2018

Accepted – 27 December 2018

ABSTRACT

Tooth wear is a grave trouble, which affects oral cavity attainments by its predation, apprehension, mastication, and ingestion of food. Management of tooth wear is always a big confront to dentist to restore its normal anatomical and functional values. This article presents a case report on restorative rehabilitation of tooth wear by private dental practitioner.

Key words- Attrition, abrasion, erosion and rehabilitation

Tooth wear (TW) is tooth surface loss (TSL), which includes insidious, cumulative, and multi factorial process that involve destruction of enamel and dentine, it affects oral health related quality of life [1,2]. The term tooth wear represents noncarious and nontraumatic dental hard-tissue loss due to various factors [3]. With the increase, life expectancy and awareness about retaining natural teeth prevalence of the tooth wear increased in natural permanent dentition [4]. According to various epidemiological evidence TW is increasing in severity and prevalence not only in older people but adults [5,6]. A study conducted by Hegde MN et al showed total prevalence of tooth wear was 40.6%, out of which attrition (29%), abrasion (23.7%), erosion (4.6%), and abfraction (6.3%). According to Hegde MN et al, tooth wear was more prevalent in the age group of 40–60 years and attrition was significantly higher among tobacco chewers and in patients with Para functional habits [7]. Thus, it shows lifestyle, dietary habits, and stress is additional contributory factors of tooth wear. Teeth wear traditionally classified into; attrition, abrasion, and erosion. Dental attrition results from tooth to tooth contact (friction) that produces well-defined facets. Although some degree of attrition observed as a part of ageing process but some of them also experienced it in early decades of life due to

Para functional habits. [8,9]. Dental abrasion is another form of tooth wears that caused by forces applied to teeth rather than tooth-to-tooth contact. Abrasion typically caused by outside elements like aggressive/ faulty tooth brushing [10]. Dental erosion is loss of dental hard tissues by non-bacteriogenic intrinsic and extrinsic acid. Intrinsic cause mainly gastric origin and extrinsic cause by dietary soft drinks, citrus fruits [11-13]. As tooth, wear affects oral cavity attainments by its predation, apprehension, mastication, and ingestion of food its management is mandatory. This article presents a case report on restorative rehabilitation of tooth wear by private dental practitioner

CASE REPORT

A 28-year female patient reported in a private dental clinic, with the chief complaint of sensitivity with cold. While taking complete case history, patient also reported the habit of clenching teeth during sleep and mild pain in Temporomandibular Joint (TMJ) area in the morning. On intraoral examination, severe attrition observed with negative tender on percussion by vertical percussion. Electric pulp tester (PARKELL, NY11735) and thermal pulp test with heat & cold performed to check the vitality

of each tooth. Every single tooth was vital on vitality test examination. On TMJ, examination mild pain was present when palpate on external acoustic meatus at pre-tragus area. On radiographic examination severe enamel, dentine loss and pulp chamber involvement observed. Depending upon clinical and radiographic examination a diagnosis of dental attrition due to bruxism made. Informed consent taken from the patient and the choice of treatment made with view that patient retains as many as teeth during her life time and depending upon patient wishes and expectations. As to treat the bruxism, identification of its etiology is important but in this case report we discuss only the rehabilitation part. Thus, according to restoration of rehabilitation root canal treatment in pulp involves teeth and crown placement on all attrition teeth chosen as treatment. Counseling of the patient ended to control over her habit of bruxism, advice the patient to use night guard, during sleep.



Fig 1: Pre-Operative Patient Teeth Model



Fig 2: Post-Operative Radiograph



Fig 3: Post-Operative Rehabilitation by Crown Placement

DISCUSSION

Extensive tooth wear intrude the efficiency of mastication, facial appearance and quality of life as well. Thus, the management of tooth wear is a subject of challenge from both preventive and restorative point of view. It needs a meticulous approach that leads to a favorable prognosis. The success full mouth rehabilitation based upon programmed treatment planning. For this all-occlusal analysis should start with initial point of examination including temporomandibular joint (TMJ) [14]. The important issue in full mouth rehabilitation is deciding the correct vertical dimension in occlusion (VDO) by which full mouth rehabilitation planned [15, 16]. Various techniques available to treat severe tooth wear, according to P E Dawson, four options are available for treatment of severely worn teeth E.g. Pin-retained full-gold restorations, increasing the OVD, crown-lengthening procedures and pulp extirpation, endodontics, and coping construction [17]. According to Turner, raising VDO can performed with multiple crown-lengthening procedures [18]. In this case, pulp extirpation, endodontics, and coping construction used as choice of treatment and the increased VDO determined by patient's physiologic factor like inter-occlusal rest space and speech. In this case, bruxism was the reason of tooth wear thus advice the patient to use night guard, during sleep.

CONCLUSION

This case report concluded that rehabilitation of tooth wear is necessary to restore normal functional, anatomical and esthetic values of teeth. If management done with proper diagnosis, experience endodontic and prosthetic skills the

rate of triumph will high. Patient satisfaction and higher success rate of treatment is fundamental key of private clinical practice.

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How to cite this article: Khare A, Dayma A Restorative Rehabilitation of Tooth Wear: A Clinical Case Report. Indian J Dental Oral Health. 2018;2(4):39-41.

Funding: None; Conflict of Interest: None Stated.