SPONTANEOUS CORRECTION OF PATHOLOGIC MIGRATION WITH PERIODONTAL THERAPY : FEW CASE REPORTS

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Introduction

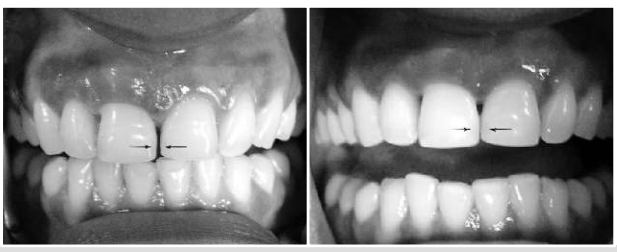
Pathologic tooth migration is defined as the movement of a tooth out of its natural position usually as a result of periodontal disease.[1] The displacement of tooth results when the balance among the factors that maintain the physiologic tooth position is disturbed by periodontal disease. Its prevalence in anterior teeth with moderate to severe periodontitis has been reported to be between 30.03% to 55.8%.[2,3,4,5] Etiologic factors reported to be responsible for pathological tooth migration include periodontal attachment loss, inflamed tissues, bone loss, occlusal factors, loss of teeth without replacement, labial frenum and iatrogenic dentistry. Specific behaviours associated with pathologic migration include bruxism, tongue thrusting, lip and finger sucking habits and playing of wind instruments.[2]

It may manifest in the form of incisor flaring, diastema formation, rotation, extrusion, tipping into edentulous spaces or a combination of any of these. Almost 1/3 of periodontal patients have the chief complaint of aesthetic disfigurement owing to undesired tooth movement, recently created spacings and incompetency of lips due to forward and downward movement of teeth.

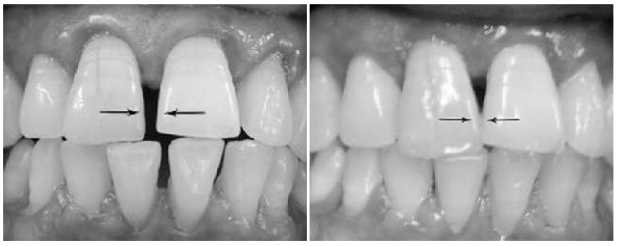
Periodontal treatment of pathologically migrated teeth can, in some instances, induce a reactive movement leading to spontaneous repositioning of teeth within dental arch[6,7,8,9]. Pathologic migration of teeth is an important sign of disease that should not be ignored. Importance of complete periodontal examination along with dental examination should be emphasized for timely detection of disease and intervention. Since treatment of pathologic tooth migration in its advanced stage is complex, expensive, time consuming and require inter-disciplinary approach, its correction in its infancy by exclusive periodontal intervention needs more attention. Few case reports showing the same have been presented.

Case Report

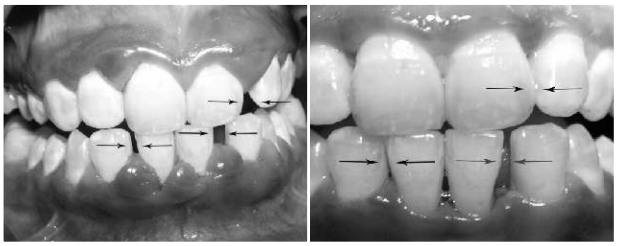
Case-I : A 45 year old female visited department of periodontics GDC Rohtak with chief complaint of appearance of gap between upper front teeth since six months (0.5mm). The patient was diagnosed as having localized moderate chronic periodontitis. Scaling and root planing was performed after noting clinical parameters like gingival index, plaque index, clinical attachment loss, pocket depth and fabricating diagnostic casts . Patient was given oral hygiene instructions and recalled after six weeks. The gap had closed when patient arrived next. (FIG I&IA)



Case-II : A 30 year old female visited the department of periodontics GDC Rohtak, with the chief complaint of growing spacing between the upper front teeth since past one year. There was absolutely no spacing one year back which had grown upto present size (1.6mm) in this period. Probing revealed pockets of 6-7mm on mesial aspect of both the incisors. Radiographs were taken and diagnostic casts fabricated. The patient was diagnosed as having generalized moderate chronic periodontitis. Scaling and root planing was performed after noting clinical parameters like gingival index, plaque index, clinical attachment loss and pocket depth. Patient was given oral hygiene instructions and recalled after six weeks. Since the case required surgery modified widman flap was performed after noting clinical parameters and fabricating casts. All measurements were done on casts using standardized gauges. Diagnostic cast revealed that the gap had reduced in size by 0.3mm after non surgical therapy. Patient was kept on one month follow up. In this period oral hygiene was checked and reinforced. Within two months of surgery the gap closed completely and again diagnostic cast was made. (FIG II&IIA)



Case-III: A twelve year old girl visited us with the chief complaint of appearance of gaps in upper and lower front teeth. A diagnosis of localized moderate chronic periodontitis was made after noting clinical parameters like gingival index, plaque index, and clinical attachment loss and pocket depth. Diagnostic casts were made. Along with full mouth scaling, curettage was performed at the required sites. Maxillary and mandibular anterior segments required surgery as decided at 6 week follow up. The gaps between 21& 22 (2.5mm), 42 & 41(0.8mm) and 31 &32 (2.4mm) reduced substantially after non surgical therapy and the first two gaps closed completely after surgical therapy. The third gap however reduced by 1mm from 2.4 to 1.4mm (FIG III &IIIA)



Discussion

Since youth and beauty are a prime focus in an aesthetically conscious world of today, unpleasant appearance caused by pathologic migration usually prompts the patients to seek dental consultation. This can further be useful, through complete periodontal examination, in recognition of periodontal disease which can be severely debilitating to the dentition both aesthetically and functionally. Periodontal treatment will not only improve aesthetics but also save the patient from losing other teeth in his mouth which have not shown migration but are suffering from periodontitis.

Pathologic migration is only a sign (and not diagnosis of disease) whose etiology is complex and multifactorial and its treatment in advanced stage is complex, expensive, time consuming and requires inter-disciplinary approach. Its correction in its infancy by periodontal treatment is quite possible as elaborated by these case reports. Grinding elongated teeth, placing composite restorations/ full crowns for diastema closure or orthodontic treatment can be done only when the periodontium is completely healthy. If it is diseased then it should be first of all made healthy by active periodontal therapy and then ,may be, all these modalities might not be even required if spontaneous repositioning occurs as we have seen in the presented cases which show gap closures and reductions as well as significant improvement in the gingival health . Pathologic migration in the presence of habits like bruxism, tongue thrusting, lip biting, finger sucking and conditions like high frenal attachment require habit breaking also apart from periodontal treatment. Hence stress should be laid on complete periodontal examination to find etiology and reach to a correct diagnosis of the condition.

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