Incidence of relapse in Orthodontics Treatments and Related Factors

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Abstract:

Background and Aim: In regard to the prevalence of orthodontic treatments, the importance of relapse and complications followed by relapse are overlooked. This is further impacted by information gaps in Iranian Dental Journals and deficiencies in previous studies. In this study we have assessed the outcome of orthodontic treatment, relapse and related factors in patients in the Private orthodontic clinic inTehran in 2009.

Materials and Methods: This study was performed using a cross sectional technique. The samples consisted of all patients with various kinds of malocclusions and the presence of pretreatment, post treatment dental casts with at least 4 years post treatment. In these patients, we also prepared post retention dental casts. The indexes, including irregularity index, arch length, inter canine width, inter premolar width, and inter molar width in both upper and lower jaws were evaluated. The change in each index out of normal range indicated relapse. The role of related factors such as sex, patient's age at the beginning of the treatment, type of treatment, duration of the treatment, the length of retention, the type of malocclusion, and family history were analyzed using Chi Square test.

Results: This study was performed on 52 cases (26%) out of 200 cases which had complete records and positive response to recall. During the study period at least 500 patients were treated. The result of relapse was 61.5% without considering the irregularity index (42.3%).The most important relapse index was maxillary irregularity index (37%), followed by the mandibular irregularity index (17%) and, the least significant index was mandibular arch length (2%). Relapse was increased in patients with less than 24 months of treatment.(P<0.0001)

Conclusion: Relapse was high regardless of irregularity index. Considering its complications, we suggest further studies to elucidate its etiology. This should be followed by preventive measures to decrease the rate of relapse.

Keywords: Relapse, Retention Period, PretreatmentPeriod, Post treatment, Malocclusion, period, irregularity index.