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Relapse after orthodontic correction of maxillary median diastema: A follow-up evaluation of consecutive cases

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ABSTRACT

An evaluation of 96 treated orthodontic patients with maxillary median diastema ranging from 0.50 mm to 5.62 mm (mean 1.22, SD 0.85) was performed 4.0 to 9.0 years after completion of active treatment. Pre- and posttreatment data were gathered from available records. Follow-up data were gathered from records and interviews of 37 patients, and from phone interviews of 59 patients. The incidence of diastema relapse was 49% when scored as either presence of a measurable space at follow-up, a history of orthodontic or prosthetic retreatment to close a reopened space, or continued use of a retainer to control relapse tendency. Logistic regression analysis revealed that pretreatment diastema size and presence of a family member with a similar condition were the only significant risk factors for relapse ($p < 0.05$), while pretreatment spacing in the maxillary anterior dentition approached significance ($p = 0.10$). No association was found between relapse and presence of an abnormal frenum or an osseous intermaxillary cleft, although patients with an abnormal frenum had a wider pretreatment diastema than those with a normal frenum ($p < 0.05$). Fremitus of the maxillary incisors was the only parameter at follow-up associated with space reopening ($p < 0.01$).

KEY WORDS: Diastema, Maxillary median diastema, Dental spacing, Space reopening, Relapse.

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