A Simple Modification of Fixed Space Maintainers for Replacement of An Avulsed maxillary Primary Central Incisor  
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Abstract  
Fixed space maintainers are fixed appliances used to maintain space so as to guide the unerupted tooth into proper position in the arch. Fixed space maintainers with acrylic extension may cause food accumulation under the acrylic extension and cause tissue inflammation. This paper reports a simple modification of fixed space maintainer in a three and half year old boy.  

Key Words: Space Maintainers; Primary Teeth; Incisors; Fracture  
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Introduction  
Traumatic injuries to primary teeth are common, especially 18 -30 months children are very prone to accidents, and in particular maxillary anterior teeth are more susceptible for injuries, with avulsion of primary teeth is around 9-12%. (1) Early loss of maxillary incisors can cause psychological, aesthetic and functional problem due to development of tongue thrusting habit in edentulous space. (2) In the present case a simple modification of fixed space maintainer was discussed.

Case Report  
A three and half years old boy reported to our dental office with complaint of unpleasant look and alteration in speech. On examination it was found 51 was avulsed two months back and 52 appears to be tilted (Fig1). On radiographic examination, a rotated 11 with no retained root segments of 51 were found. Preformed stainless steel orthodontic bands were adapted to the 55 and 65 followed by alginate impressions of upper and lower arches. 19 gauge stainless steel wire was adapted on the lingual surfaces of upper and lower arches. Stainless steel wire was roughened at the 51 area for better retention. Composite shade was selected and composite build up was done to replace the 51. Finishing and polishing was done and finally the modified fixed anterior space maintainer was cemented with luting glass ionomer cement (Fig2). Patient was recalled for check up every three months.

Discussion  
Fixed space maintainers with acrylic extension may cause food accumulation under the acrylic extension and cause tissue inflammation. (2) Fixed space maintainers with proper design are less damaging to the oral tissues and more appropriate for long periods. (3) Modification of the fixed space maintainer was chosen in this case because of the long duration of the space maintainer required. Composite build up was done because it provided the best color match. Central incisor shaped build up was done with neatly polished cervical area to minimize the food accumulation and subsequent soft tissue inflammation.

In conclusion a simple modification of this type can easily reduce the disadvantages of fixed space maintainers and reduce patient discomfort there by increasing the durability of the space maintainers.

References  

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