

Preventing Extraction of Teeth in Orthodontics

Orthodontists have long debated the subject of extraction [1]. Today's practitioners generally agree that extraction is needed in certain cases.

The frequency of extraction, however, varies considerably among orthodontists. The most recent published study shows the range to be from 25% to 85% [2].

Generally, extraction is done to relieve severe crowding or excessive protrusion. Advocates of non-extraction treatment have used different types of dental arch expansion as an alternative to extraction.

Expansion has been criticized by those favoring extraction. They believe the extent of expansion is limited, there is relapse of expansion, and there is uncertainty about the possibility of expanding the mandibular arch.

One limitation with most of the studies concerning expansion or extraction is that they have been done in the late mixed dentition or permanent dentition. Data indicates that early mixed dentition expansion can reduce the rate of extraction to 20% or less [3].

The preliminary data from a study of our early mixed dentition cases shows the rate of extraction to be less than 1%. This retrospective study involves the records of 207 consecutively treated 7-9 yrs old patients who were treated with the same basic expansion protocol. Only two of the 207 patients required extraction of their bicuspid. One of the subjects had four first bicuspid removed to improve the gingival attachment in their lower incisor region. The other had two upper first bicuspid removed to correct a skeletal class II malocclusion [Figure 1, A-D].

It appears that the combined effects of facial growth and tissue adaptability during the mixed dentition period allows for correction of even severely crowded teeth without the need to remove permanent teeth.

The results from our study show that expansion in the early mixed dentition virtually eliminates the need for extraction. Given the public's disdain for extraction of teeth, early mixed dentition orthodontic treatment may provide the answer in the quest for avoiding extractions [Figure 2, A-C].

Figure 1 (A-D)



7 years, 10 months - Prior to Phase I



10 years, 8 months - After Phase I



12 years, 9 months - Prior to Phase II



14 years, 5 months - After Phase II

Figure 2 [A-C]

