

Chapter 2

ELASTICS IN ORTHODONTICS

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1. INTRODUCTION

Elastics and elastomeric materials are used in several states of orthodontic treatment. With good patient cooperation, they make it possible for the physician to fix both anteroposterior and vertical direction anomalies.

Elastics were discussed at a dental conference for the first time in 1893 by Calvin S., but their first clinical usage was carried out by Henry A. Baker for applying intermaxillary force in a class II case [1].

Natural latex elastics are used usually in the Begg's method for intermaxillary fixation and intermaxillary force application purposes [2].

Chain-formed elastomers are usually included in the Edgewise technique. Their most important function in this technique is moving the tooth or teeth along the arch wire. There are several types of usage for elastics (Figure 1).



Figure 1. Types of Using Elastics

2. EXAMINING ELASTIC FORCES

The force that is applied by elastics on the tooth or teeth may vary based on the dimensions of the elastics. Stress creation depends on the region they are applied, distribution on the periodontal ligament, direction, length, diameter, the contour of the root of the tooth, alveolar process, rotation of the tooth, age of the patient and patient cooperation [3].

Elastic forces may be easily combined by anchorage flexions where class I elastic traction will be applied. However, the most important issue to be consid-

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Therefore, the elastic is applied between all pairs of teeth in the occlusion, thus being applied to the central teeth on the opposite side of the mid-line.

4.3. Other elastics

4.3.1. Asymmetric elastics

They are usually used in cases where one side is class II and the other is class III. As it may be understood from the naming, their purpose is to solve dental asymmetry.

4.3.2. Finishing elastics

They are used to adjust posterior teeth at the final stage of treatment. In class II cases, the elastic continues along single-cusp maxillary teeth and ends in the maxillary molar tooth. It is recommended to apply these with a force of 2 oz. [10].

4.4. Based on forces

Light-pull	2½ oz.
Medium-pull	4½ oz.
Heavy-pull	6½ oz.

5. CONCLUSION

Orthodontic elastics have a broad place in current and modern orthodontic treatment. Especially in recent years, they have provided orthodontists with a broad field of usage as their negative aspects have been eliminated with advanced technology.

It should be kept in mind that patient cooperation is highly important in the use of elastics.

If the orthodontist who continues the treatment with elastics sees no results, in this case, they should question the patient in addition to the material.

When elastics to be applied carefully and with recommended forces are combined with patient cooperation and a good patient-physician relationship, they will definitely provide the orthodontist with an opportunity of a positive treatment process.

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