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Self-ligating brackets in orthodontics: current concepts and techniques (2011)

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Self-ligating bracket systems are not a new concept, but they have gained a lot of popularity and are now widely accepted. Self-ligating brackets eliminate the use of steel or elastomeric ligatures. Manufacturers claim that this system reduces the friction between the bracket and the wire and consequently provides more efficient tooth movement. However, the efficiency and *effectiveness* of self-ligating brackets are still controversial.

This textbook provides extensive information about current concepts on the clinical use of self-ligating brackets with a series of references. The book contains nine chapters divided into two main parts. The first part, from Chapters 1 to 3, covers an overview of the bracket systems such as the history, composition, and detailed appearance of several different self-ligating brackets systems. The second part, from Chapters 4 to 9, covers the therapeutic and clinical aspects of using these bracket systems.

The first chapter discusses previous and recent development of fixed appliances and self-ligating brackets. Self-ligating systems were promoted because it was thought that a ligature-less bracket provided reduced friction, shorter overall treatment time, longer intervals between visits, and reduced time. The author claims that such expectations are not sufficiently scientifically verified and this was further discussed in detail in Chapter 3. A self-ligating bracket contains a clip or other mechanics and Chapter 2 describes the difference and technical issues of the self-ligation bracket systems versus conventional bracket systems. Chapter 3 provides a detailed look at the most popular self-ligating bracket system. The author claims that self-ligating brackets

perform slightly better during the levelling and alignment phase, but do not reduce the overall treatment time, in comparison with conventional ligation. In addition, self-ligating brackets are not necessarily more hygienic.

Chapter 4 embraces diagnosis and treatment planning. Chapter 5 focuses on the oral hygiene in patients wearing fixed appliances. The precise positioning of the brackets is generally independent of the ligation system, but critical for efficient tooth movement. Chapter 6 illustrates the direct and indirect bonding techniques for accurately positioning brackets on the tooth or a model. Chapter 7 is devoted to clinical cases using self-ligating bracket systems. Treatment mechanics, lateral expansion, distalization of the molars, space creation, and correction of jaw relationships are discussed. The discussions of the combined *use* of self-ligating bracket systems and dental or surgical expansion techniques using dental and skeletal expansion with or without mini-screw implant anchorage are well presented. Clinical cases also include aesthetic treatment using self-ligating brackets and lingual self-ligating brackets. Chapter 8 illustrates the various types of auxiliary equipment and techniques that facilitate the use of self-ligating bracket systems. Last chapter focuses on the retention and stability.

Overall, this textbook provides the orthodontist with up-to-date information and substantial references for better understanding of the clinical use and efficacy of self-ligating bracket system.

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