Splinting – When and How?

Abstract: The prognosis of a tooth following trauma is critical. This depends on various factors, including the type of splint used for immobilization and the immobilization period. This article discusses the above factors with an added note on splint removal.

Clinical Relevance: This article is relevant for clinicians who treat traumatic injuries as it should help them to decide on the type of splint to be used and the period of immobilization.

Dent Update 2011; 38: 341–346

One of the questions that arises when a case of trauma is seen is ‘Does this tooth require splinting?’ If yes, consideration is then given to what kind of splint is to be used and for how long? Splinting is required when a tooth has to be immobilized to permit adequate healing following traumatic injuries, such as subluxation, luxation, avulsion and root fracture or transplantation. This article not only answers the above questions but also focuses on the clinical aspects of splinting traumatized teeth.

The term splint has been defined by the American Association of Endodontics (AAE) as a ‘rigid or flexible device or compound used to support, protect or immobilize teeth that have been loosened, replanted, fractured or subjected to certain endodontic surgical procedures. Hippocrates used wires made of gold and linen for splinting the maxillary and mandibular teeth together. Abulcasuis, a Spanish physician in the late 10th and early 11th Centuries, used gold, silver or silk ligatures for fixing loosened teeth. Hammond was the first person to use an arc bar splint in 1871. He used a bent metal arch and ligated it to the teeth. The design and concept of splinting traumatized teeth evolved from the splints used for immobilization of jaw bones, that required rigid splints for a longer period of time. Until the late 1970s, rigid splints were used, which did not allow physiologic tooth movement.

Figure 1. Requirements of a splint.