

Dentures that Grow Along

Thanks to the prevention measures undertaken by the dentistry, the formation of dental cavities with German children is declining. However, caries is not the only disease leading to lesions on children's teeth. With increasing frequency, dentists diagnose faulty amelogenesis, the so-called molar-incisor-hypomineralization (MIH) - a disorder that affects the permanent incisors and molars. Children affected with MIH show pasty and dull teeth that crumble when chewing.

According to vFM Dental Laboratory GmbH CEO Alexander von Fehrentheil, MIH is an illness that appears in 1 out of 10 school children. Its causes remain unknown, though a study carried out by the American Journal of Pathology concluded that



Uniform connection between KidCadCrown and cement



Digital imprint, scanned-in jaw, available in a set of individual molars



Bio-compatible material KidCadCrown versus metal crown

the accessory agent Bisphenol A (BPA) evokes the faulty mineralization of teeth in rats. Scientists, however, have clearly recognized that teeth that are affected by MIH, are insufficiently mineralized. Dentists can help children who are suffering from the disease by providing their affected teeth with dental crowns. The vFM Dental Laboratory GmbH placed in Hamburg has filed a patent application for a procedure that manufactures kids' crowns in a way that has numerous advantages compared to conventional treatment methods: Long-established crowns are made from steel or zircon. The hardness grade of these materials does not suit the natural enamel. Management Expert Johann Philipp Loewe of vFM explains: "In the long run, these materials can lead to a faulty weight bearing of the jaw joints which are still in growth. Aesthetic reasons also play a crucial role." Employees of vFM Dental Laboratories GmbH make crowns from biocompatible and ceramic-reinforced composite materials.

KidCadCrowns are dental crowns for children that

are milled with a loose fit and that are manufactured from high-performance bio ceramic composites. They concur with the degree of hardening of natural enamel and are brought into shape within the child's mouth. After the crown has been placed and the composite has fully hardened, the crown's walls can be thinned out to an extent that allows for the composite to burden the crown. Next to the crown material, the concept also comprises a dual-hardening luting composite that does not require bonding or corroding. The manufacturers explain that as the jaw grows, new crown material can be added.

During the procedure, no acid is used within the children's mouth. On top of that, all crowns can be added in just one sitting. After the child's jaw has been cast (using conventional or digital technologies), dentists at vFM Dental Laboratory can select and order a perfectly fitting set of crowns for every customer. Sets of crowns can be mixed and matched individually according to form and color.

The Hamburg Dental Laboratory first introduced their KidCadCrowns at the 21st annual meeting of the German Association for Pediatric Dentistry (DGKiz) in Freiburg in September 2014.

For further information, go to www.vfm-hamburg.de/kinderkronen

(DZW | Ausgabe 37/14)