Protection of permanent molars with fissure sealant.

by Dr. Jacqueline Esch

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Especially in paediatric patients with a high risk of caries the use of fissure sealants can be an effective method of caries prevention [1]. By sealing the enamel pits and fissures on the occlusal surfaces of permanent molars with a resin-based material, an impermeable barrier is created between the enamel and the oral environment. The risk of caries development in the particularly vulnerable parts of molar teeth is reduced significantly.

Since the retention of sealants is better on sound enamel than on questionably carious tooth surfaces [2], we use to seal permanent molars of children who are likely to develop caries a short time after the complete eruption of the teeth. For the first molars the treatment is usually carried out at the age of six to seven. The procedure is explained by means of the following patient case.

Clinical case

The seven-year-old female patient presented in our practice for paediatric dentistry for one of her regular check-ups and prevention appointments after her permanent maxillary and mandibular first molars had erupted. Due to her high caries risk we decided to seal the fissures with 3M™ Clinpro™ Sealant.

Figure 1: Initial situation: Mandibular right first molar after the placement of rubber dam.
Résumé

The described procedure is a quick and effective way of reducing the caries risk in paediatric patients. In order to provide for durable results, the quality of the sealant layer should be assessed on a regular basis and replaced if necessary [3].
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Dr. Jacqueline Esch graduated from the University of Regensburg (Germany) in 1991. She worked as an assistant teacher at the University of Regensburg for 6 years. In 1997 she joined a private practice for paediatric dentistry in Munich, where she developed a keen interest in all aspects of paediatric dentistry including the treatment of anxious patients, advanced tooth decay, paediatric crowns and treatment under nitrous oxide. In 2000 she completed a continuing education program in Newark, NJ (USA) with Prof. M. Haupt.

Since 2003 she’s been a Specialist for Paediatric Dentistry and co-owner of the continuing education center for paediatric dentistry in Munich. She is an active member of the EAPD, engaged in several commissions and since 2012 a fellow of the Pierre Fauchard Academy. Dr. Esch is giving lectures internationally and leading certified courses for conscious sedation.

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