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A Case For Sealants

Interesting Case Study Documents Sealant Efficacy

The efficacy of pit and fissure sealants for prevention of dental caries has been supported by clinical studies spanning three decades.[1] Sealants are now universally accepted by both pediatric and general dentists as an important preventative measure.

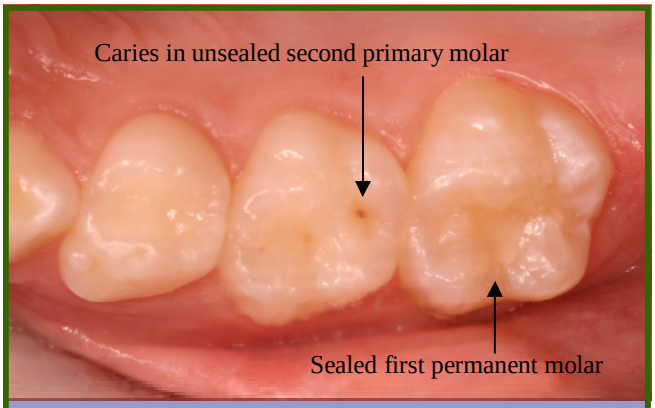
Children are especially susceptible to caries. They tend to have more sugar in their diets and be less vigilant about hygiene than adults.

First permanent molars, often referred to as six-year molars, are extremely susceptible to caries. Parents do not realize that these are permanent teeth requiring optimal hygiene to ensure a lifetime of function. Children are not old enough to understand the situation or the consequences.

Practitioners also face a challenge with newly erupted permanent molars because they are difficult to isolate from moisture during sealant placement. Traditional hydrophobic pit and fissure sealants require a dry field, and this is not easy to obtain, especially when treating children.

Here is an interesting case study that demonstrates just how successful sealants can be in preventing caries.

In this case a childôs maxillary first permanent molar was sealed in August 2004 with Embrace WetBond Pit and Fissure Sealant.



This photo taken in November 2007 shows a maxillary first permanent molar sealed in August 2004 with Embrace WetBond Pit and Fissure Sealant. After more than 3 years, the sealed first permanent molar is in perfect condition. Note that the adjacent second primary molar, which was not sealed, has developed caries in the occlusal lingual pit. The sealant has protected the first permanent molar. This side-by-side comparison in a clinical setting provides a convincing case for the efficacy of pit and fissure sealants.

Photo courtesy of Joseph P. OôDonnell, DMD, MS

Embrace is moisture tolerant and bonds to the moist tooth. This wet-bonding feature is invaluable not only for erupting first and second permanent molars but for all sealant placements. The mouth is a wet environment, and Embrace behaves favorably in a wet field.

ñBecause moisture contamination is a significant risk factor to sealant retention, the introduction of a moisture-tolerant resin-based sealant that is clinically successful provides clinicians with an additional choice in their preventive regimen.ò[2]

A photo taken in November 2007, more than three years after the permanent molar was sealed, shows the sealed first permanent molar in excellent condition, but the adjacent second primary molar has developed caries in the occlusal lingual pit.

Although the childôs diet and tooth anatomy predisposed the primary molar to caries, Embrace WetBond protected the permanent tooth from a similar fate.

These two teeth, sitting side-by-side, one sealed and the other not, provide clinical evidence supporting the case for sealants and shows why dentists are recommending pit and fissure sealants for their patients.

1. Strassler HE. Commentary: A moisture-tolerant resin-based pit-and-fissure sealant: research results. Inside Dentistry 2008; 4(7):50-52.

2. OôDonnell JP. A moisture-tolerant resin-based pit-and-fissure sealant: research results. Inside Dentistry 2008;4(7):50-52.