

Prevention programmes adapted to the individual patient's needs.

by Dr. Jacqueline Esch

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There is an increasing awareness worldwide that individual caries prevention programmes for children are particularly important. As a consequence numerous countries have published their own guidelines with recommendations regarding effective preventive strategies. The pertinence of individual preventive programmes for children is obvious: On one hand the primary teeth have a decisive impact on the development of the jaw. On the other hand the main goal of maintaining an individual's natural dentition for a lifetime is reached only if the patient shows compliance, implements the required oral hygiene practices at home and visits the dentist on a regular basis.

The Bornholm method

In our international practice for paediatric dentistry in Munich, Germany, we have implemented the so-called Bornholm method, an effective caries prevention programme recommended by the Department of Preventive and Paediatric Dentistry at the University of Greifswald, Germany. It suggests that the first appointment is made when the child is eight months old to give parents advice regarding dental care at home, check the effectiveness of their techniques, examine the teeth and remove plaque in the dental practice. The diagnosis and an additional caries risk assessment using a scoring system are taken into account to determine the recall intervals for check-ups and professional tooth cleaning. During the subsequent visits which are continued until the age of 18, the prevention programme is adapted to the age-specific and individual skills and knowledge of the children. The goal is to teach them how to prevent caries progression with optimal oral hygiene and ensure that no fillings are required and an inflammation of the soft tissues does not occur. The following case example shows how we proceed with a ten-year-old child.

Patient Case

The female patient visits our dental practice twice per year for professional tooth cleaning and advice. At first she was asked to clean her teeth. For an assessment of the caries risk (which is not necessary at every appointment) 3MTM ClinproTM Cario L-PopTM was used (Fig. 1). This rapid test determines the lactic acid formation rate on the tongue and thus measures the metabolic activity of caries-causing bacteria.



Figure 1 : Administration of the lactic acid indicator swab.

The swab was turned on the tongue four times and then brought into contact with the diagnostic liquid in the blister as recommended by the manufacturer (Fig. 2). Afterwards the test swab showed the colour of field 5 on the colour chart, indicating a moderate rate of lactic acid production (Fig. 3). This means that there are some weaknesses in the oral hygiene of the patient and there is a medium caries risk. Subsequently, a plaque test was performed with coloured liquid (Fig. 4).

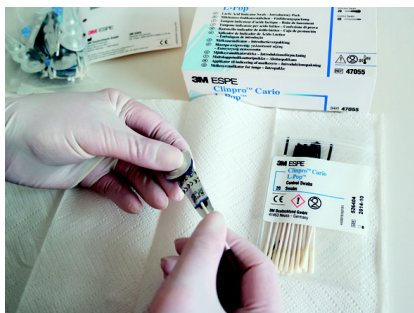


Figure 2 : Activating of the diagnostic liquid in the blister and turning of the swab.

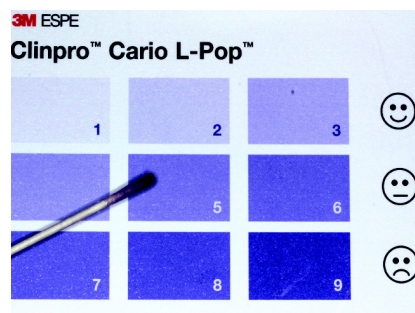


Figure 3 : Result of the caries test.



Figure 4 : Performing the plaque test.

After rinsing with water the remaining plaque was revealed (Fig. 5), showing that tooth brushing techniques needed to be improved. Specific advice was given. For professional tooth cleaning, 3MTM ClinproTM Prophylaxis Paste with a fine grit was used (Figs. 6 and 7). Figure 8 shows the result of the treatment. In a final step, 3MTM ClinproTM White Varnish may be applied for additional fluoride treatment (Figs. 9 to 12). This product leaves behind a virtually invisible film that adheres to the tooth surface and continuously releases fluoride.



Figure 5 : Situation after rinsing with water.



Figure 6 : Incorporation of the polishing paste into the instrument.



Figure 7 : Professional tooth cleaning and polishing.



Figure 8 : Patient after professional tooth cleaning.

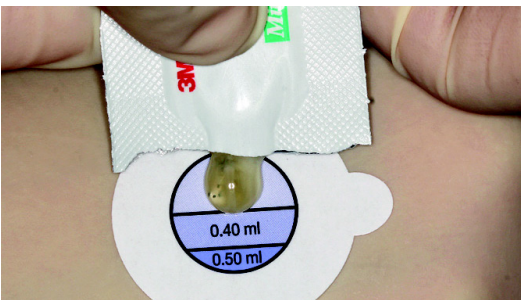


Figure 9 : Dispensing of the Clinpro™ 5% Sodium Fluoride White Varnish onto the dosage sticker to ensure that the recommended amount of varnish – 0.40 ml for patients with mixed dentition who require extensive tooth surface coverage – is applied.

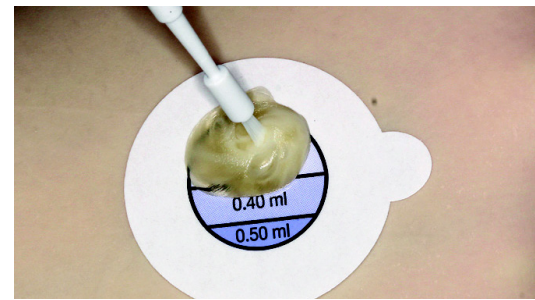


Figure 10 : Thorough mixing of the Clinpro™ White Varnish with the applicator brush (as with all sodium fluoride varnishes, the components might separate during storage).



Figure 11 : Application of 3M™ Clinpro™ White Varnish onto the patient's teeth horizontally in a thin, uniform layer. Since it sets in the presence of saliva, drying of the tooth surfaces is not required.

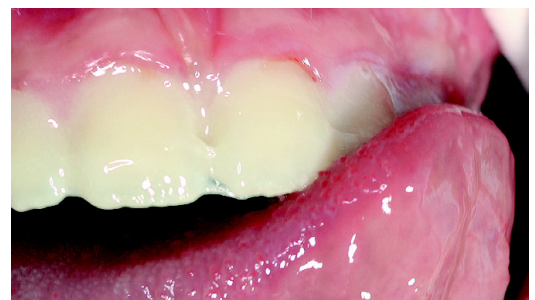


Figure 12 : The fluoride varnish also migrates to hard-to reach surfaces, which is supported by the patient licking the teeth with her tongue.

The treatment and advice given should be adapted to the specific needs of the patient by taking into account the age, social factors and caries risk. By beginning early and creating a positive childhood experience, the compliance of the young generation is ensured and the basis for a lifelong preservation of the natural dentition are laid.

Conclusion

Based on our experience with children of all ages we recommend the integration of individual caries prevention programmes into the dental practice.



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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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