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Abstracts

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Efficacy, Clinical Applicability and Safety, of Curodont™ Repair in Children with Early Occlusal Caries

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Objectives: Occlusal surfaces of erupting permanent molars are highly prone to caries. Self-assembling peptide (P11-4) has been proven to enhance biomimetic mineralization of early carious lesions. Aim of this study was to evaluate safety, clinical applicability and effect of using P11-4 (Curodont™Repair) in non-invasive treatment of early occlusal lesions on erupting permanent molars. Methods: 70 patients (28 females, mean age 10.03±2.7 years, dft 2.8±3.1, DMFT 1.3±2.5) with active early occlusal lesions (ICDAS-II: 1-3) on first or second permanent molars at eruption were allocated in this randomized, controlled, single blinded post-marketing study to test (Curodont™Repair+Duraphat®) or control (Duraphat®) groups. Safety and applicability were evaluated using dentist’s/patient’s questionnaires on adverse events, difficulties of application and satisfaction. Lesions were assessed at baseline and recalls after 3 and 6 months regarding caries activity according to Nyvad criteria, clinical status (ICDAS-II) and with Diagnodent®. At every recall, oral health instructions were given and fluoride varnish was applied on all lesions. Results: Data showed good patient acceptance for Curodont™Repair. Investigators considered the application as much easier than a composite filling or even a fissure sealant. No adverse events or allergic reactions were observed after application. After 6 months (n = 62; 31 test lesions), two test and three control lesions had progressed and had to be sealed, while nine test and two control lesions showed regression. All other test and control lesions were stable. 24 test lesions were sealed, while nine test and two control lesions showed regression. Two test and three control lesions had progressed and had to be observed after application. After 6 months (n = 62; 31 test lesions), even a fissure sealant. No adverse events or allergic reactions were considered the application as much easier than a composite filling or even a fissure sealant. Results suggest that Curodont™ Repair may present a simple, safe and effective non-invasive treatment for early occlusal carious lesions on erupting teeth in conjunction with topical fluoride.

Approved by the Ethic Committee/University of Greifswald, informed consent from patients and their parents was obtained. This study is supported by Credentis, Switzerland.

This study aimed to investigate the effects of an imperfect placebo used for controlling a randomized clinical trial comparing treatments for arresting initial approximal caries in primary molars. One-hundred forty one children presenting at least one approximal surface of primary molars with initial caries lesion were included. Children were allocated in three groups of active interventions: silver diamine fluoride (SDF) (n = 47), resin infiltration (n = 47) and control group (active treatment: only flossing) (n = 47). Depending on the allocation, patients were orientated to flossing and received the active treatment and respective placebo therapy(ies). We used the placebo to not underestimate daily flossing by those who received other active treatments. However, an imperfect placebo was used to ‘simulate’ resin infiltration, since just the rubber dam was positioned and no local anesthesia and clamps were used. To assess the effect of using the imperfect placebo, we compared the groups regarding discomfort reported by patients, flossing compliance and occurrence of plaque reduction. We also recorded additional time and costs, as well the cost-efficacy of using the placebo in this study. Children who received the ‘active’ resin infiltration reported higher levels of discomfort (p < 0.01). However, similar compliance (SDF: 47%; infiltrant: 37%; control: 45%, p = 0.47) were achieved among groups.

SDF and infiltrant groups reduced similarly the plaque compared to control (RRSDF = 1.3; 95% CI: 0.7–2.3; RRinfiltrant = 1.5; 95% CI: 0.8–2.7). On average, 1.8 dollars per child (SD: 0.8) were spent with the placebo. Considering the potential for similar plaque reduction, the cost-efficacy ratio of including the placebo was 0.53, 1.75, 1.77, respectively, for the groups infiltrant, SDF and control. In conclusion, using the imperfect placebo may be useful and cost-effective to guarantee similar children’s compliance and plaque reduction when treatments with different complexities are offered.

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