

## **CR 27482: Remineralization of Occlusal Pit and Fissure Caries After Using Ozone**

**R. MORRISON**, Harbour Dental Practice, Donaghadee, United Kingdom, and E. LYNCH, Queen's University, Belfast, United Kingdom

### **Abstract**

Ozone has been shown to clinically reverse primary root carious lesions and early occlusal pit and fissure caries. This study aimed to assess the use of Ozone to manage pit and fissure caries in a general dental practice. **Objectives:** This study assessed the effect of a novel ozone delivery system (HealOzone unit, CurOzone USA) on primary pit and fissure carious lesions over a 13-week period in a general dental practice. **Methods:** 148 subjects were randomly allocated to one of 2 groups. 108 patients were entered with 186 test carious lesions whilst another 40 subjects were entered with 40 control lesions, which did not receive any treatment. Each carious lesion had been deemed to require conventional drilling and filling. Ozone was applied to each test lesion for 40 seconds. After 13 weeks, patients were recalled and the lesions were clinically re-assessed for severity. **Results:** 52 test subjects with 87 test lesions have attended the recall visit. There were no observed adverse events. 70 of the ozone-treated primary pit and fissure carious lesions had clinically reversed based on the clinical measurement of lesion severity whilst the other 16 lesions remained stable and none became worse ( $P < 0.05$ ). The control lesions did not significantly change clinically. **Conclusions:** This treatment regime using ozone may be considered to be an effective alternative to conventional "drilling and filling" for primary occlusal fissure carious lesions in general dental practice.