Occlusal Lesions in 44 Cheek Teeth From Horses With Clinical Signs of Apical Pulpitis

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Secondary dentinal lesions in equine cheek teeth are good indicators of apical disease. Maxillary infundibular caries is not correlated with apical disease unless it involves enamel. Authors’ address: Department of Clinical Veterinary Science, University of Bristol, Langford, Bristol BS40 5DU, UK; e-mail: Miriam.Casey@bristol.ac.uk (Casey). © 2008 AAEP.

1. Introduction
Detailed occlusal examination is a potentially valuable diagnostic test for apical pulpitis. Information is needed regarding the relevance of occlusal findings. This study aimed to assess prevalence and severity of secondary dentinal defects and infundibular caries in cheek teeth (CT) extracted from cases of apical pulpitis and normal controls.

2. Materials and Methods
Twenty-three mandibular and twenty-one maxillary CT extracted from cases of apical pulpitis were examined occlusally; 50 mandibular and 40 maxillary CT from cadavers with no history of dental disease were also studied. Triadan positions and eruption ages were matched. Occlusal secondary dentinal defects and maxillary infundibular caries were identified and graded. Prevalence of lesions in clinically affected and control teeth was compared.

3. Results
Secondary dentinal defects were significantly over-represented in diseased teeth. Of diseased mandibular teeth, 56.5% had defects compared with 0% of controls. Of diseased maxillary teeth, 52.4% had dentinal defects compared with 2.5% of controls. There was no difference in prevalence of infundibular caries in diseased teeth and controls (both 52.3%). Infundibular caries involving enamel were significantly over-represented in diseased teeth (28.6%) compared with controls (2.5%).

4. Discussion
Examination of occlusal secondary dentine is a vital component in investigation of suspected apical pulpitis in equine CT. Infundibular caries not involving enamel are a poor indicator of apical disease. Infundibular caries involving enamel are significant.

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