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Oral health in children with chronic renal failure

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Abstract Seventy children with chronic renal failure (CRF) aged 4-13.6 years were recruited from the Renal Unit of the Great Ormond Street Hospital for Children. Indices were recorded for dental caries, dental plaque, gingival inflammation, gingival enlargement, and enamel defects. Salivary urea, buffering capacity, and the oral streptococcal flora were determined for 25 of the children. A significantly greater proportion of the CRF children was caries free, 40% compared with 8.5% of the controls. The mean plaque score was significantly greater in the CRF group for both the primary 12.7 (16) and permanent dentition 22.0 (18.2) compared with the controls, 5.3 (7.6) and 15.5 (13.3), respectively. Eight CRF children had gingival enlargement. Enamel defects affecting the permanent teeth were observed in 57% of the CRF children compared with 33% of the controls. The buffering capacity was significantly greater in the CRF group, pH 6.4 (0.8) compared with the controls pH 5.6 (0.8). The mean salivary urea level (mmol/l) was significantly greater in the CRF children, 11.6 (5.9) compared with 3.6 (1.4) for the controls. The isolation frequency of *Streptococcus mutans* was significantly greater from controls compared with the CRF children ($P=0.002$). An integrated dental service needs to be developed with emphasis on tooth brushing to prevent gingival hyperplasia and periodontal disease after puberty.

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