Calcitriol oral pulse therapy in children with renal osteodystrophy

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A 6-month protocol of oral pulse calcitriol was used in nine uraemic children (2-14 years old) on dialysis who presented with renal osteodystrophy. Calcitriol was administered twice a week, 4 ?g per dose for patients over 30 kg and 3?g for patients less than 30 kg. Plasma levels of parathyroid hormone, calcium, phosphorus and alkaline phosphatase were carefully controlled during the study. Parathyroid hormone levels decreased by 68% and 56% by the 2nd and 6th months of treatment in seven patients, while they remained unchanged in two patients with focal segmental glomerulosclerosis and massive proteinuria. Eight hypercalcaemic episodes from 77 determinations were observed, all of them recovered after 1 week of vitamin D withdrawal. We conclude that oral calcitriol pulse therapy is a good alternative for renal osteodystrophy in uraemic children. Careful monitoring of plasma parathyroid hormone and calcium is needed during follow-up when using this approach in paediatric patients.