Letters to the Editor

To the Editor

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We read with interest the article of Hinnie et al. (doi: 10.1007/s002230001201) concerning the estimated prevalence of familial hypocalciuric hypercalcemia (FHH) [1]. However, we feel that we should correct their interpretation of our article on the differentiation between FHH and primary hyperparathyroidism (PHPT) [2].

The 1987 paper by Stuckey et al. described the use of both fasting urinary calcium excretion (CaE) and parathyroid hormone (PTH) estimations in the differentiation of these two conditions [2]. This paper did not, as Hinnie implies, advocate the use of CaE alone. Subsequently, biochemical studies using the intact PTH (iPTH) assay have validated this approach and the utility of combined CaE and iPTH assessment [3, 4].

Depending on the clinical series reported, nearly half of surgically proven PHPT cases have a CaE within the range demonstrable in FHH [5]. However, this degree of renal calcium conservation is usually seen only when the iPTH is very high in PHPT. Conversely, in FHH, the iPTH is rarely more than 2 times the upper limit of the reference range of the assay used [6]. It is not unusual for the iPTH to be elevated less than two-fold above the reference interval in patients with FHH after the age of 30. The rise in iPTH with aging in FHH is probably due to secondary hyperparathyroidism that is present in addition to the resetting of the calcium sensing receptor threshold [4, 7].

We believe that both iPTH and CaE should be considered in the differential diagnosis of parathyroid dependent hypercalcemia.

Paul Glendenning

Department of Core Clinical, Pathology and
Biochemistry, Royal Perth, Hospital, Perth,
Western Australia 6000

Bronwyn G.A. Stuckey

Department of Endocrinology and Diabetes,
and Keogh Institute for Medical Research,
Sir Charles Gairdner Hospital, Perth,
Western Australia 6009

References

1. Hinnie J, Bell E, McKillop E, Gallacher S (2001) The prevalence of familial hypocalciuric hypercalcemia. *Calcif Tissue Int* 68:216–218
2. Stuckey BG, Kent GN, Gutteridge DH, Pullan PT, Price RI, Bhagat C (1987) Fasting calcium excretion and parathyroid hormone together distinguish familial hypocalciuric hypercalcaemia from primary hyperparathyroidism. *Clin Endocrinol (Oxf)* 27:525–533
3. St John A, Stuckey BG, Kent GN, Price RI, Gutteridge DH (1989) Intact PTH levels in patients with familial hypocalciuric hypercalcemia. *Clin Biochem Revs* 10:94
4. Gunn IR, Wallace JR (1992) Urine calcium and serum ionized calcium, total calcium and parathyroid hormone concentrations in the diagnosis of primary hyperparathyroidism and familial benign hypercalcaemia. *Ann Clin Biochem* 29:52–58
5. Glendenning P, Gutteridge DH, Retallack RW, Stuckey BG, Kermod DG, Kent GN (1998) High prevalence of normal total calcium and intact PTH in 60 patients with proven primary hyperparathyroidism; a challenge to current diagnostic criteria. *Aust N Z J Med* 28: 173–178
6. Firek AF, Kao PC, Heath H, 3rd (1991) Plasma intact parathyroid hormone (PTH) and PTH-related peptide in familial benign hypercalcemia: greater responsiveness to endogenous PTH than in primary hyperparathyroidism. *J Clin Endocrinol Metab* 72:541–546
7. McMurtry CT, Schranck FW, Walkenhorst DA, Murphy WA, Kocher DB, Teitelbaum SL, Rupich RC, Whyte MP (1992) Significant developmental elevation in serum parathyroid hormone levels in a large kindred with familial benign (hypocalciuric) hypercalcemia. *Am J Med* 93: 247–258

Reply

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I read with interest the comments by Glendenning and Stuckey (doi: 10.1007/s00223-001-0040-2) on our use of fasting urinary calcium excretion (CaE) in diagnosing familial hypocalciuric hypercalcemia (FHH) [1]. I agree totally with their views that CaE alone cannot be used to differentiate FHH from primary hyperparathyroidism (PHP). We point out in our paper that none of the available biochemical measurements are ideal for diagnostic purposes. I agree that the 1987 Stuckey paper [2] showed that using iPTH and CaE together improve the differentiation of FHH from PHP and indeed we have produced similar data [3]. However, the 1987 Stuckey paper did show that CaE tended to be lower in FHH than PHP and we were using this observation as one of