Experience of the Reliability of Intraoperative Sampling of Tissue PTH in Parathyroid Surgery: Letter to the Editor

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Published online: 1 May 2010
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We congratulate Horányi et al. [1] on their work using parathyroid hormone (PTH) tissue aspirates to confirm tissue as being parathyroid in origin. Theirs is the largest reported series out of the four series published [1–4]. We have also been using a similar technique over the past 15 months and have collected 248 samples that have been validated by comparing biochemical results with fixed specimen histopathology results. Our results are due to be presented at the ESES meeting in Vienna in May. Our results look very much like Horányi et al.'s with a 100% specificity achievable. However, we had four false-negative results from an inadequate first sample; repeat sampling confirmed their true nature. Because of this, the PTH level we needed to confirm parathyroid tissue origin at a 100% specificity was substantially higher at 1168 pg/ml. We constructed a ROC curve for the test (Table 1), the results of which were very encouraging: At a PTH level of 403 pg/ml, a sensitivity of 97.62% and specificity of 98.04% were achieved. Our sampling technique was slightly different and we are not sure if this may have accounted for the difference in sampling results. We used a smaller needle (23 gauge) and diluted the tissue in the hub of the needle to 2 ml of saline before placing the sample in an EDTA serum sample bottle to send to the lab as if it were a blood sample for intact PTH analysis. We used the standard assay and not the “quick assay” reading. We also

Table 1 ROC curve results

Area	0.9981
Std. Error	0.0013
95% confidence interval	0.9955–1.001
<i>p</i> value	<0.0001

found a significant difference in abnormal and normal parathyroid tissue aspirates in primary hyperparathyroidism (HPT) (paired *t* test, *p* = 0.011). As many people also measure intraoperative PTH, we agree that this is an economic technique for confirming tissue origin rather than relying on frozen section.

References

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