Role and feasibility of Intraoperative Rapid Parathormone Assay for Enabling Parathyroid Excision

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Authors have put in an appreciable and painstaking effort in bringing forth this publication with useful content [1]. But, certain glaring facts prompted me to present following comments and seek clarifications. Firstly, with your protocol of measuring serum calcium on the first postoperative day and a month later, one is likely to miss hypocalcemia occurring in 10–30 % of cases, which tends to occur after 48 h. Was there no hypocalcemic episode in any of these cases and how was it treated or prevented? Hypocalcemia is all the more expected with greater prevalence of symptomatic primary hyperparathyroidism (primary HPT) in developing countries. Secondly, even through minimally invasive surgery (MIS) approach, one can look at another ipsilateral parathyroid by retraction, as double adenomas are the commonest cause of recurrence or persistence, which may show off later on imaging after removal of the larger adenoma [2]. What was the distribution of superior and inferior parathyroids in your series. How was superior and inferior parathyroids labeled preoperatively, as this has bearing in placement of incision and how was the incision planned? In large adenomas, a 2.5 cm MIS is not enough, so how large was the parathyroid adenoma in the case of a 9-year-old boy.

Thirdly, where there any oxyphil adenomas (OA) in histopathology, as parathyroid hormone (PTH) secretory rates in OA is lower and different from the more common chief cell adenoma. Fourthly, though serum PTH has short half life, in 15–25 % of cases PTH does not normalize immediately after curative PTx [3]. Intraoperative PTH (IOPTH) assay has

many fallacies if not judiciously read, due to disease, patient, and assay factors. Its role is controversial in secondary and tertiary HPT. Fifthly, as vitamin D deficiency is common in India, what was its status in this cohort? Sixthly, the presence of too many criteria for IOPTH fall indicates that none is sacrosanct and 98 % cure rate of MIS without IOPTH are reported [2]. The cure rate of 6/7 (86 %) is quite low and could fall further with longer follow up. Lastly, was multiple endocrine neoplasia type 1 (MEN 1) syndrome ruled out in three of your cases who were <40 years, as that leads to higher failure rates and MIS is not recommended in MEN 1. As the authors mentioned, IOPTH is only complementary and gives a degree of false assurance to surgeon similar to what a drain does after surgery to prevent seroma or hematoma, thus adding extra caution rather than comfort in managing HPT.

Experience in endocrine surgery, judicious interpretation of preoperative imaging, exclusion of MEN 1 and family HPT, absolute diagnosis of sporadic primary HPT, standard PTH assay, true removal of parathyroid tissue at surgery, customized approach to patient, and guarded counseling to patient regarding success of PTx are golden rules to make MIS+IOPTH highly successful.

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