A PROFILE OF PRIMARY HYPERPARATHYROIDISM IN ADOLESCENTS AND YOUNG ADULTS


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In adolescents and young adults, primary hyperparathyroidism (PHPT) is an uncommon diagnosis. We compared the clinical characteristics of these patients to those of older patients with PHPT. We hypothesized that PHPT in adolescents and young adults is more often caused by single-gland disease and is amenable to minimally invasive parathyroidectomy (MIP). We retrospectively reviewed the medical records of 452 consecutive patients who had surgery for PHPT. Patients ranged in age from 13 to 94 years, and were dichotomized into younger (age<30 years, n=17, 3.8%) and older (age≥30 years, n=435, 96.2%) patients. Continuous baseline, intraoperative and postoperative measures were not normally distributed and were summarized with medians and interquartile ranges (IQRs). Groups were compared using Wilcoxon rank sum test or Fisher’s exact test, and significance was set at p<0.05. Median [IQR] age was 24 [23-27] years for the younger group and 58 [51-66] years for the older group. On preoperative measures, the younger and older age groups did not significantly differ on positivity of the sestamibi scan (70.6% vs. 82.5%; p=0.20), ultrasound (64.7% vs. 79.8%; p=0.14), and serum PTH levels (median [IQR]: 111 [76-145] pg/mL vs. 110 [84–152] pg/ml; p=0.73), respectively. The younger group had higher serum calcium levels (11.6 [11.1–12.2] mg/dl) compared to the older group (11.1 [10.7–11.5] mg/dl; p=0.01). MIP was performed less frequently on the younger patients (70.6%) compared to older patients (88.7%; p=0.04). However the cause of PHPT did not significantly differ between the groups; 82.4% of the younger patients and 89.9% of the older patients were found to have single adenoma (p=0.11). The younger and older groups did not significantly differ on percent drop from baseline for intraoperative PTH monitoring (81.7% vs. 79.3%; p=0.46), respectively. Younger patients exhibited higher serum calcium levels than older patients on pre-operative testing. They exhibited similar rates of positive preoperative sestamibi and ultrasound scans, and of disease related to single adenoma. However, younger patients underwent a higher rate of planned bilateral exploration. Our data suggest that MIP should be more frequently considered in younger patients because of the similar rates of single gland disease.