

# INVESTIGATING THE OUTCOMES OF MINIMALLY INVASIVE PARATHYROIDECTOMY (MIP) VERSUS CONVENTIONAL TECHNIQUE IN PATIENTS WITH PRIMARY HYPERPARATHYROIDISM: A RANDOMIZED CLINICAL TRIAL CONVERT CASE

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## **Abstract body (should contain maximum 300 words)**

Background: Current procedures for management of primary hyperparathyroidism rely on preoperative localization studies in order to perform a direct exploration of the neck, so-called conventional parathyroidectomy (CPT). This access has been challenged recently by the introduction of minimally invasive parathyroidectomy (MIP) in order to achieve superior clinical results. We investigated the advantages and outcomes of these surgical approaches. Material and methods: this randomized clinical trial (RCT) was conducted on patients with primary hyperparathyroidism supposed to adenoma carcinoma during 3 years. Patients were randomly underwent whether MIP or CPT due to remove parathyroid adenoma. Pre-operative examinations included ultrasonographic examinations in order to localize the abnormal parathyroid glands, sestamibi scanning, and serum PTH measurement before, during, 5 and 10 minutes after the operation for all patients were compared. An intra-operative PTH drop >50% from the highest either pre-incision or pre-excision level after parathyroid excision was considered a surgical success. Finally, the outcomes and success of the two techniques were compared. Results: Of 96 patients with mean age  $49.92 \pm 14.63$  years, 36 (37.5%) were male and 60 (62.5%) were female. The average start time of symptoms was 28.7 months (1 month to 6 years). Findings showed that the success rate in the MIP group was 93.7 in the 5th minute and 87.5% in the CPT group, but the success rate in both groups was 100% in the minute 10. MIP was superior to the CPT in terms of operating time, hospital stay, voice change and a lower drop in calcium. Conclusion: MIP vs CPT is safer treatment for pHPT patients with a suspected parathyroid adenoma. In our research this technique avoids the potential complications of extensive neck exploration, reduces operative time, and has a high cosmetic satisfaction.