

*OUTCOME OF PARATHYROIDECTOMY FOR
PRIMARY HYPERPARATHYROIDISM IN
SOHAG UNIVERSITY*

HOSPITAL IN 5 YEARS: RETROSPECTIVE STUDY

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Abstract

Introduction and aim of the work:

Primary hyperparathyroidism (pHPT) is a common endocrine disease treated very effectively by surgery. It is the commonest cause of hypercalcaemia. The majority of cases are caused by adenoma (80% to 85%), whereas approximately 15% have diffuse hyperplasia of all four parathyroid glands. Rarely (1%), parathyroid carcinoma is the cause of hyperparathyroidism. Parathyroid diseases has not been investigated in our community before. This study had been conducted to analyze the outcome of surgical treatment of (pHPT), as regard the success rate, complications and recurrence.

Patients and methods:

Between May 1999 and July 2004, 14 consecutive patients with (pHPT), who had been submitted to surgery in Sohag University Hospital were enrolled in this study. Analysis of clinical presentations, laboratory and imaging studies, surgical approach, intraoperative findings, and outcome assessment in terms of success rate, complications had been done.

Results:

A total number of 14 patients diagnosed as pHPT, 10 were women and 4 were men. Their age ranged from 25-51 years, with a mean age of 41.2 ± 6.9 years. Bone affection was the dominant presenting feature (79%). All cases showed high level of serum calcium (mean 3.13 ± 0.42 mmol/L) and parathormone hormone (mean 787.4 ± 256.6 pg/mL). Accuracy of ultrasound scanning of the neck was 71% in localization of

Surgery remains the only curative therapy for patients with hyperparathyroidism. In experienced hands, parathyroidectomy is associated with high cure rates and minimal morbidity^(9&10). Over the last decade, many novel techniques have been used to optimize the outcomes of patients undergoing surgery for HPT, including cervical block anesthesia, intraoperative intact PTH monitoring, and radio guided resection^(11&12).

Aim of the work:

To highlight the problems of parathyroid lesions in our locality and to evaluate the outcome of surgical treatment of pHPT as regards success rate, complications, and recurrence.

Material and methods:

Patients

A retrospective analysis of 14 patients with clinically and biochemically proven pHPT, who were underwent surgery in Sohag University Hospital, between July 1999 and July 2004 were studied. Patients with previous parathyroid or thyroid surgery were excluded. All patients were submitted to full history, thorough clinical evaluation, and routine laboratory investigations and serum calcium, and parathormone hormone. Both ultrasonography and CT scanning of the neck were routinely performed as a standard preoperative imaging modalities. All radiological findings regarding the location, size and shape of each parathyroid lesion, concomitant thyroid disease, and other abnormalities were recorded. Sestamibi scan was feasible only in the last 8 cases of the studied group.

Surgical operations of those patients were carried out under general endotracheal anesthesia. All explorations were carried out through conventional bilateral neck exploration, used for thyroid surgery. Surgical findings including; the number, size and location of the diseased glands were recorded with removal of all pathologically enlarged parathyroid tissue. All the resected parathyroid glands were examined histologically. All patients were seen one, six weeks, and six months after surgery, at which time serum pTH, and total calcium levels were obtained. Surgical cure was defined as a serum calcium level $< 2.55\text{m Mol/L}$, at 6 months

parathyroid lesions, while that of CT and Sestamibi scan were 85% and 87.5% respectively. A single parathyroid adenoma was the commonest lesion (86%). All patients, but two, had been followed up from 6 months to 18 months with a mean of 11 ± 4 months. The success rate was achieved in all but one (92.9 %), who had been found to be an ectopic parathyroid adenoma in the superior mediastinum. There was one case who died due to the morbid general medical condition. Postoperative temporary hypocalcaemia was observed in two cases. No permanent injury to RLN was reported in our cases.

Conclusions:

Parathyroid disease is not uncommon problem in our locality. Surgery of pHPT is a very successful operation with minimal morbidity. Early discovery of pHPT gives the best chance of cure and avoid disastrous complications of this disease.

Introduction and aim of the work

Primary hyperparathyroidism (pHPT) represents a spectrum of disorders characterized by an excessive parathyroid hormone production and hypercalcaemia. It is a common endocrine disease treated very effectively by surgery. It is the commonest cause of hypercalcaemia⁽¹⁾. The majority of cases are caused by adenoma (80%to 85%), whereas approximately 15% have diffuse hyperplasia of all four parathyroid glands. Rarely (1%), parathyroid carcinoma is the cause of hyperparathyroidism⁽²⁾.

Manifestations of symptomatic pHPT include overt bone disease; kidney stones; and non specific gastrointestinal, cardiovascular, and neuromuscular dysfunction⁽³⁾. However, accidental discovery of parathyroid adenoma has been reported, either during neck ultrasound scan^(4&5) or during surgical exploration of the neck for thyroid surgery⁽⁶⁾.

Diagnosis of pHPT should be based on high serum calcium and parathormone hormone. There have been many methods to localize parathyroid lesions, of these neck ultrasound, CT scan, and MRI. Sestamibi scan is one of the most accurate and widely used modality for localization of pHPT⁽⁷⁾. More recently, quick intraoperative parathyroid hormone assay for uniglandular and multiglandular parathyroid disease has been reported to help in accurate detection of any remaining parathyroid lesions, during surgery and consequently minimizes the failure rate⁽⁸⁾.