SUMMARY

The term primary hyperparathyroidism is applied to those clinical disorders characterized by an inappropriate secretion of PTH, which results in hypercalcemia.

Primary hyperparathyroidism may be due to solitary adenoma (85%), multigland hyperplasia (10%), which may occur sporadically or in association with multiple endocrine neoplasia (MEN) type 1 or 2, double adenoma (3%) and carcinoma (2%).

The disease is characterized by general symptoms of elevated serum calcium, P.T.H. levels and / or associated conditions. Most commonly, patients present without symptoms. Hyperparathyroidism may be diagnosed in an otherwise asymptomatic patient by incidental discovery during routine blood chemistry analysis of calcium level. Symptoms of early disease, when present, are specific to hypercalcemia. They include "muscle weakness, depression, increased sleepiness, nausea, vomiting, acute abdominal pain (which might be the result of pancreatitis), constipation, and polydipsia. Frequent and occasionally painful urination and dysuria and/or back pain may be observed, the latter from nephrolithiasis.

The diagnosis rests upon biochemical determinations. The most important of these are scrum calcium and P.T.H.

Increased serum calcium together with P.T H . is the clue for the diagnosis of primary H.P.T.

Because of the small size of the parathyroid glands and because of their variable position and the complex anatomy "of the neck, localization of abnormal parathyroid tissue at surgery is often difficult and tedious. So, a number of different tests have been devised to help localization of parathyroid tumors either preoperatively of intraoperatively. These include ultrasonography, Technetiuni-99-Sestamibi scanning, computed tomography and magnetic resonance imaging.

There is a general agreement that the only corrective treatment of P.H.T. is surgical treatment, however medical treatment may be described in pre-operative preparation and in unfit patients.

Many surgeons agree that there is no need to do preoperative localization tests when operating in the virgin neck. All expert parathyroid surgeons cure 95% or more of such patients although they have not had localization tests. One could argue that the best localization procedure is to find an excellent parathyroid surgeon. However preoperative localization tests allows for unilateral exploration or much less invasive Parathyroidectomy that takes a short time and may be done even under local anesthesia ,thus we recommend the routine use of ultrasound scan and Technetium Te 99m sestamibi scanning .

If the cause is solitary adenoma, treatment is by surgical removal of that gland.

If the cause is hyperplasia, there are two options for surgical treatment:

1.Subtotal parathyroidectomy i.e. removal of three glands with partial excision and preservation of well vascularized remnant of the fourth parathyroid gland in situ similar in size and weight to the normal gland.

2. Total parathyroidectomy with auto-transplantation into the forearm musculature to avoid post-operative persistent hypoparathyroidism.

In recent years, the development of high-resolution ultrasonography, MIBI scintigraphy, radioguided surgery, and intraoperative quick intact PTH assay has been paralleled by the introduction of several minimally invasive parathyroidectomy procedures that have come into widespread use for the treatment of PHPT.