THE BIOASSAY OF THYROID STIMULATING HORMONE (TSH)

INTRODUCTION

Thyroid stimulating hormone (TSH or Thyrotropin) plays important roles in regulating thyroid functions, such as iodide trapping, organic hormonal synthesis and releasing of organic hormonal iodine; i.e. thyroxine and tri--iodothyronine into the circulation. Clinically, whenever there is low thy--roidal reserve, such as hypothyroidism or Hashimoto's Disease, TSH might appear in the serum in substantial level. Iodine deficient goitre may be the result of an increase in the amount of circulating TSH. Contrary to old belief, hyperthyroidism shows very small and hardly detectable amount of TSH in serum.(2 Determination of the quantity of TSH of these entities have been partly reported.

There are varieties of methods of TSH assay. The method which is accepted more widely is that of McKenzie.(32) In 1966, McKenzie's method was modified by Good and Stenhouse(22) using a design which estimates the factor of animal, ~~and~~ day variations and the residual effect, which is best suited for the estimation of small quantities of TSH in the limited number of samples and is capable of detecting changes in circulating TSH in the normal rat. Hence, it is desirable to study TSH level especially in serum of hypo--thyroids, hyperthyroids and euthyroids. The method would be valuable in evaluation and assessment of the thyroid conditions.