Introduction

Illness produces a wide variety of metabolic effects .As the endocrine system is intimely concerned in regulating metabolism, not surprisingly extensive hormonal changes also result from illness. Some have clear advantage to the patient; notably, the surge in catabolic hormones after illness, allowing mobilization of energy stores which may be necessary for survival **(Warren et al., 2008).**

Failure to recognize changes that accompany illness may lead to a mistaken diagnosis of primary endocrine disease and inappropriate treatment. Thus it is important to recognize these abnormalities which may be expected to occur to prevent mistaken diagnosis of primary endocrine problem **(Parker et al., 2008).**

Most ill patients with low T4 and T4 values are considered to be euthyroid as other indices of thyroid function. Moreover, the low T3 state may be homeostatic mechanism leading to reduced catabolism **(Chopera., 2007).**

Raised plasma concentration of growth hormones , catecholamines , cortisol during an acute illness explains hyperglycemia which commonly accompanies illness To make the important distinction between hyperglycemia due to illness and that due to diabetes mellitus , an estimation of glycosylated hemoglobin will help in this differentiation **(Gerich et al ., 2008).**

Hypogonadism is features of many diseases e.g. haemochromatosis, myotonia dystrophica; following surgery, myocardial infarction, burns, and respiratory failure **(Lime et al., 2008).**

Many diseases e.g. Anorexia nervosa, malnutrition, renal failure, liver cell failure, malignancy and many autoimmune diseases have a lot of hormonal changes **(Kaplein et al., 2009)**