Introduction

Thyroid hormones regulate growth, development, differentiation and metabolic processes by interacting and activating thyroid hormone receptors ***(Von Vliet, 2001).***

Thyroxine (T_4) is the principal hormone secreted by thyroid gland and in fact it appears to function as a prohormone for the production of the more biologically active form triiodothyronine (T_3) by 5-monodeiodination ***(Valero et al., 2004).***

During fetal life , thyroid gland develops with production of thyroxine (T_4) and triiodothyronine (T_3) and secretion into the serum from about 12 weeks gestation and levels of which increase to term ***(Rovet, 2004).***

Transient hypothyroxinernia was suggested as a common phenomenon, in expression of temporary hypothalamic-pituitary immaturity or a manifestation of non thyroidal illness ***(Lim et al., 2005).***

Transient hypothyroxinemia characteriszed by low levels of serum thyroxine, is a common finding among premature infants ***(Biswas et al., 2002).***

Sick term infants with low 5 mintues Apgar score have been shown to have a reduction in the thyroid hormone levels after birth ***(Moster et al., 2002).***

Preterm infants with perinatal illness develop transient hypothyroxinemia during the first week of life . Term infants has been investigated less extensively ***(Lim et al., 2005).***