Introduction

Thyroid hormones plays an important role in the growth, development, and metabolism of mammalian tissues, and their excess or deficiency affects many organs and systems. However, controversy exists regarding the impact of iodothyronines on human male reproduction ***(Jannini et al., 1995).***

Several investigations have reported studies on the role of thyroid hormones on reproductive tract growth and function, however the effects of thyroid hormones deficiency on the developing or adult testis and whether testicular development affects reproductive behavior are unclear ***(Gomes WR, 1970).*** Later results suggested that thyroidectomy in immature male rats caused severe inhibition of gametogenesis and Leydig cell development ***(Chowdury and Arora, 1984).*** Hypothroid male mice were infertile in one study ***(Beamer et al., 1981)*** but fertile in others ***(Chubb and Henry, 1988). Jannini and coworkers (1994)*** have shown that Sertoli cells contain thyroid hormone receptors and that the function of immature Sertoli cells can be regulated by thyroid hormone. It was shown that thyroid hormone affects the energy metabolism of sertoli cells in rat testes ***(Palmero et al., 1994).***

It was reported that neonatal hypothyroidism induces adult Leydig cell differentiation and proliferation ***(Hardy et al., 1996).*** Later studies indicate that neonatal iodine deficiency can significantly increase spermatogenic function in rats ***(James et al., 2000).*** In contrast to this view, ***Treeds et al. (1998)*** have reported hypthyroidism causes arrest of Leydig cell differentiation. Other study revealed that thyroid hormone is critical to initiate the onset of mesenchymal cell differentiation into adult Leydig cells ***(Siril Ariyaratne et al., 2000).***

All these observations indicated that thyroid hormone is an important hormone for the testicular function but whether this hormone increases or decreases the testicular function that is the question?

Aim of the work

The aim of this study is to determine the effects of thyroid hormone on testicular function including spermatogenic and endocrinal function of the testis in male albino rats, and the effects of induced hypo-and hyperthyroidism on the testis.