

**Introduction
&
Aim of the Work**

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The mechanism by which varicocele affects fertility remains unclear and various possibilities continue to be discussed. Reduced testicular perfusion of the affected testis because of increased venous pressure leading to atrophy with typical reduction in testicular volume was suggested by some investigators (*Comhaire et al., 1976 and Turner, 1983*). However, other investigators found that testicular perfusion is increased in varicocele patients (*Nagler et al., 1988*).

Renal/adrenal reflux is another possible mechanism that could explain the effect of varicocele on fertility and especially the bilateral effect of unilateral varicocele (*Nagler et al., 1997*).

Various studies have been performed examining the potential differences between serum concentration of various substances in the internal spermatic vein and the peripheral venous circulation, among which are the catecholamines, cortisol, prostaglandines E and F as well as serotonin but the results were controversial (*Comhaire & Vermeulen, 1974; Comhaire & Vermeulesn, 1982; Hudson et al., 1985; Lindholmer et al., 1973; Ito, et al., 1982 and Cockett et al., 1984*).

Interleukin-6 (IL-6) is a multifunctional cytokine produced by many different cells such as fibroblasts, monocytes, endothelial cells, T-cells, as well as Leydig and Sertoli cells (*Syed et al., 1993*).

Elevated serum level of IL-6 have been observed in a number of pathological conditions including bacterial and viral infections, human immunodeficiency virus infection, autoimmune diseases, trauma and certain neoplasia (*Hirano et al., 1990*). The inclusion of IL-6 in this study is based on the fact that such cytokine is produced by both Leydig and Sertoli cells (*Syed et al., 1993*) and varicocele is a pathological condition having a pantesticular affection. So, it appears beneficial to examine the effect of varicocele on such cytokine as compared to control subject without varicocele.

In this study we are aiming at evaluation of a possible role of some relevant steroid metabolites, serotonin, as well as IL-6 in varicocele pathogenesis by measuring their level in the internal spermatic vein of varicocele patients in comparison with the control subjects without varicocele.