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JOURNAL ARTICLE

Presence and modulation of interleukin-12 in seminal plasma of fertile and infertile men

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Interleukin-12 (IL-12) is a unique cytokine that recently has drawn considerable attention because of its immunomodulatory properties and its possible involvement in several normal physiological and pathophysiological processes. In the present study, concentrations of IL-12 were determined, in the seminal plasma of fertile (n = 33), male-factor-infertile (n = 27), and immunoinfertile (n = 14) men, to investigate its role, if any, in male infertility. Levels of IL-12 were expressed both as picograms per milliliter and as picograms per milligram protein. IL-12 was detected in seminal plasma of fertile men as well as in that of infertile men. The levels of IL-12 in seminal plasma of both male-factor and immunoinfertile men were significantly ($P < 0.05$) different from those of fertile men, when levels were expressed as picograms per milligram protein. When expressed as picograms per milliliter, the levels of IL-12 differed significantly between the immunoinfertile group and the fertile/male-factor-infertile group. There was significant correlation between the IL-12 levels and the total sperm count and percentage of morphologically normal sperm in the semen, whether groups were analyzed together or individually by condition. These findings suggest that IL-12 may have a role in fertility and that its derangement may be involved in male infertility.

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