Abstract

Varicocele has a common association with male infertility, but its exact role is still debated. Apoptosis has been suggested as one of the mechanisms of varicocele-associated infertility. Granulysin is a molecule that plays a role in apoptosis with no previous study about its role in male infertility. This case-controlled study aimed to assess seminal plasma granulysin level in infertile patients with varicocele. This study involved 90 men that were allocated into fertile normozoospermic men (n = 20), infertile men without varicocele (n = 30) and infertile men with varicocele (n = 40). These men were subjected to history taking, clinical examination, semen analysis and estimation of seminal granulysin. In general, seminal granulysin level was significantly elevated in infertile men compared with fertile men. Infertile men with varicocele showed significantly higher seminal granulysin compared with infertile men without varicocele, in bilateral varicocele cases and in grade III varicocele. Seminal granulysin level was negatively correlated with sperm concentration, sperm motility, sperm normal forms percentage and testicular volumes. It is concluded that increased seminal granulysin has a negative impact on spermatogenesis in infertile men in general and in infertile men associated with varicocele in particular.

KEYWORDS

apoptosis, granulysin, male infertility, semen, varicocele