



SUBCLINICAL VARICOCELE – A CAUSE OF MALE INFERTILITY

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Introduction. According to World Health Organization, infertility is "a disease of the reproductive system defined by the failure to achieve a clinical pregnancy after 12 months or more of regular unprotected sexual intercourse (and there is no other reason, such as breastfeeding or postpartum amenorrhea). Several epidemiological studies suggest that a major cause of male infertility is varicocele, namely – 39-60% of infertile patients present subclinical varicocele. The diagnosis of this entity is problematic, because the implementation of screening programs is not justified by clinical studies, and therefore are neither recommended by the American Associations of Urology, nor by the European Association of Urology.

Material and methods. Review type study. Bibliographic search in PubMed and Google Scholar databases, applying the keywords „subclinical varicocele”, „infertility”, „semen analysis”, „Doppler- ultrasound”, „treatment” and „oxidative stress”. The full articles published in known journals during the last 5 years as a priority have been selected. Information on subclinical varicocele epidemiology, etiology, diagnosis and treatment were selected and processed, so the final bibliography includes 49 references.

Results. Recent studies suggest that subclinical varicocele has a high incidence among infertile men (between 39-60%), moreover, it increases about 10% with each decade. The anatomy of the left testicular vein, genetic factors, body mass index and valvular incompetence are considered major etiological factors, which steadily lead to scrotal hyperthermia and, subsequently to oxidative stress which damages sperm cell, alters semen analysis and leads, in time, to testis hypotrophy.

The main diagnostic tool remains Doppler-ultrasound, but unfortunately, it cannot be used in a large scale as screening program due to poor cost – benefit analysis, therefore subclinical varicocele is diagnosed occasionally, during a routine examination. Treatment is also a concern for urologists because two recent meta-analysis have shown that surgery is ineffective as it doesn't improve nor semen analysis, neither pregnancy rates. Conservative treatment, although promising, has several limitations due to it's short time efficacy and patient compliance. Several studies suggest that subclinical varicocele is a progressive disease and might evolve, through time, in a clinical one.

Conclusions. We still need several convincing studies to assess the impact of subclinical varicocele on reproductive function, especially in young adults, who haven't yet fulfilled their reproductive purposes, it's progression to clinical varicocele (there are not yet convincing studies), the treatment options (as surgery is not the only option any more and more priority is given to conservative treatment) and the need of implementation of screening programs in young boys and adolescents in order to prevent on time the deterioration of testis function.