

## **Abstract**

Inhibin A and B participate to regulation of gametogenesis. We investigated their applicability as a marker of gametogenesis of men fertility disorders. We monitored the levels of inhibins during the treatment. We interested in their paracrine activity, relationship in sera, follicular fluid and seminal plasma depending on cause of fertility failure.

We studied the levels of inhibin B in serum and seminal plasma from 355 men treated for fertility failure, in the context of their andrological and immunological findings (quality of spermiogrammes and acrosome area). We monitored concentration of levels of inhibin A and B in serum and follicular fluids depending on cause of fertility failure, on course and treatment outcome. We took blood samples in the time of the oocytes collection, of the embryo transfer and early pregnancy. The follicular fluids were obtained during the oocytes collection. The levels of both of inhibins were measured by ELISA in all medium (serum, follicular fluid, seminal plasma).

We confirm, that inhibin B is useful marker of spermatogenesis in men, but is necessary to examine patient in complex with determination of immunology profile or quality of acrosome. Seminal plasma is, in some indicated cases, more suitable diagnostics material.

Similarly inhibin B in women seems to be more accurate marker of intraovarian processes in course of oocyte maturation, mainly its levels in follicular fluids. In our study inhibin B better reflected a presence of oocyte and the serum levels were with correlation to levels in follicular fluid. Inhibin A reflected prime ovarian reserve, the potential to reproductive processes. There was difference between its serum levels depending on cause of fertility failure. The difference between levels inhibin A and B, especially in follicular fluids, take place to detailed research their paracrine activity.

***Key words:*** *inhibin A, inhibin B, follicular fluid, seminal plasma, infertility, acrosom, in vitro fertilization*