

Genetic Factors in Male Infertility and their Implications

**Arvind Rup Singh, Radek Vrtel, Radek Vodicka, Ishraq Dhaifalah,
David Konvalinka and Jiri Santavy**

*Department of Medical Genetics & Fetal Medicine, University Hospital, Palacky University, I.P.
Pavlova 6, Olomouc 775 20, Czech Republic*

KEYWORDS Male infertility; microdeletions; Y chromosome; AZF; ICSI

ABSTRACT Infertility in 20% of involuntary childless couples is attributable to purely male factors. In about 30% of such males the underlying cause is genetic. Male infertility problems tend to aggregate in the families and a decline of ~ 50% in the sperm concentration has occurred in the past 50 years. The mutations and microdeletions in the MSY region, especially those involving AZF, can cause oligospermia or azoospermia. The use of various assisted reproductive techniques by infertile men with microdeletions would significantly increase the incidence of male infertility.