

Cytogenetic Abnormalities in Infertile Men in the Prešov Region (Slovakia)

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ABSTRACT Chromosome anomalies belong to genetic factors, which participate on etiology of reproductive failure. The aim of the study was to investigate the frequency of chromosome abnormalities in infertile men in the Prešov region in Slovakia (1998-2014). Karyotyping using G-banding and C-banding methods was performed in 1426 subjects including 948 infertile men and 478 controls. Karyotype analyses revealed chromosomal abnormalities in 2.6 percent of infertile men. Detected frequency of sex chromosome abnormalities in men with diagnosed azoospermia was 11.5 percent compared with 1.0 percent of chromosome abnormalities in men with severe oligospermia ($p < 0.01$). Heterochromatin variants were identified in 13 percent of infertile men. Detected frequency of heterochromatin variants of infertile men was significantly higher than in controls ($p < 0.0001$). The results of the study might suggest the role of chromosome anomalies in human fertility. All these findings support genetic screening of infertile men before starting assisted reproductive treatments.