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Phenotypic Characteristics of Male Subfertility and Its Familial Occurrence

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Genetic factors can attribute to male subfertility. A case-control study was carried out to investigate familial occurrence of male subfertility and the phenotypic characteristics of familial male subfertility. The medical data and family histories of 253 severely subfertile men who were candidates for intracytoplasmic sperm injection were compared to the data from 243 randomly selected men. The prevalence of male fertility problems among brothers and maternal uncles of subfertile men was significantly higher than among controls (brothers 10.4% vs 0.5% and maternal uncles 1.7% vs 0.2%). The phenotypes of subfertile men with a positive family history more often showed normal levels of follicle-stimulating hormone (FSH) and luteinizing hormone (LH) compared to the phenotypes of subfertile men with a negative family history. In addition, subfertile men with a positive family history had a lower percentage of motile sperm. Genetic aberrations, including a chromosomal abnormality or a microdeletion of the Y chromosome, were present in 13.8% of the severely subfertile men. Male subfertility appears to have a familial occurrence, especially among brothers and maternal uncles. Furthermore, examinatoin of the data suggests that subfertile men with a familial occurrence of male subfertility more often have normal levels of FSH and LH and a lower percentage of motile sperm.

Key words: Male infertility, intracytoplasmic sperm injection, genetics, family history

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