



Varicocele and male infertility in Northeast China: Y chromosome microdeletion as an underlying cause

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ABSTRACT. The prevalence of Y chromosome microdeletions among azoospermic, severe oligozoospermic, moderate oligozoospermic, and mild oligozoospermic patients with varicocele-related and idiopathic infertility shows conflicting data in Asian countries. We aimed to detect this frequency in Northeast China, and investigated spermatogenic defects whether associated with varicocele or Y chromosome microdeletions. All samples underwent a thorough physical examination, semen analysis, and PCR analyses for Y chromosome microdeletions. We randomly selected 150 infertile non-obstructive azoospermic patients with left varicocele (Group 1), 150 idiopathic non-obstructive azoospermic infertility patients (Group 2), 150 infertile severe oligozoospermic patients with left varicocele (Group 3), 150 idiopathic severe oligozoospermic infertility patients (Group 4), 150 infertile moderate oligozoospermic patients with left varicocele (Group 5), 150 idiopathic moderate oligozoospermic infertility patients (Group 6), 150 infertile mild oligozoospermic patients with left varicocele (Group 7),

150 idiopathic mild oligozoospermic infertility patients (Group 8), and 60 healthy unrelated men with proven fertility were recruited as control subjects (Group 9). We observed that our samples from Northeastern China had a higher frequency of microdeletions among the non-obstructive azoospermic individuals with varicocele, as compared with other Asian countries. Furthermore, the spermatogenic defect is due to the underlying Y chromosome microdeletion, and not the varicocele itself. Although varicocele is not the cause of male infertility, it may be associated with male infertility in the Northeastern Chinese population.

Key words: Varicocele; Male infertility; Y chromosome microdeletion; Azoospermia; Severe oligozoospermia