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PRINT: ISSN 0972-3757 ONLINE: ISSN 2456-6330

Int J Hum Genet, 1(2): 113-116 (2001)

DOI: 10.31901/24566330.2001/01.02.07

A Novel Meiotic Anomaly: Infertility Associated with Polyploid Germ Cells and Multi-tailed Sperm

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KEY WORDS Infertility; aberrant meiosis; polyploidy; multi-tailed sperm; premeiotic S-phase

ABSTRACT Here we describe an apparently new meiotic anomaly in a healthy 35-year-old man with an oligo-astheno-terato-zoospermy (OAT syndrome), normal male karyotype, and unremarkable endocrinological status. Molecular analysis of the Y chromosome did not reveal any disparity to normal controls. The analysis of cells from the ejaculate showed cells in all meiotic stages with pairing anomalies and a high percentage of polyploid germ cells including endoreduplicated metaphase I chromosomes. Most of the sperm were morphologically deviant with irregular large and/or binucleated heads and a variable number of up to 8 tails. To the best of our knowledge such a combination of meiotic disturbances has not been reported so far and points to a defect confined to the meiotic prophase, especially the S-phase

[Home](#)

[Back](#)
