



Case Report

Tetraploidization in Wilms tumor in an infant

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ABSTRACT. Genetic instability is frequent in human cancer. Unscheduled tetraploidization can trigger cell transformation and tumorigenesis. We made a cytogenetic analysis by Giemsa-trypsin banding of a stage I, biphasic Wilms tumor diagnosed in a 10-month-old male. An evident karyotypic heterogeneity was found. Four different subclones of tumor cells were observed, with DNA content varying from diploid to near-tetraploid complements. The genetic events involved in the acquisition of aneuploidy in Wilms tumor remain unclear. We hypothesize that initial tetraploidization caused aberrant cell division, leading to abnormal chromosomal segregation, cell transformation and tumorigenesis.

Key words: Wilms tumor; Cancer biology; Cytogenetics;
Tumor biology