Objective: To establish a high resolution melting analysis with unlabeled probes for genotyping CCL2-2518 T > C.

Methods: Two unlabeled probes were designed. One is complementary to wild type and another is complementary to the mutant type. A total of 71 health people were performed by HRM with unlabeled probes for genotyping CCL2-2518 T > C, and TaqMan method was used to verify the results from above.

Results: The results using the HRM with unlabeled probes were consistent with that using TaqMan method. The difference between the temperatures in two probe peaks by using the probe complementary to wild type is 2.1°C; and the difference between the temperatures in two probe peaks by using the probe complementary to mutant type is 5.5°C.

Conclusions: Establishment the high resolution melting analysis with unlabeled probes for genotyping CCL2-2518 T > C is a simple, economic, sensitive, accurate, and fast technique, which could be used in clinical inspection.

Keywords: Polymorphism; high resolution melting analysis; CCL2-2518 T > C

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AB188. Meiotic prophase I defects in an oligospermic man with Wolf-Hirschhorn syndrome with ring chromosome 4

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Background: Ring chromosomes are often associated with spermatogenetic failure. However, the mechanism is poorly understood. We here reported a single man with severe oligospermia and a ring chromosome 4 with a microdeletion at 4p16.3.

Methods: Synapsis (asSCP3), recombination (as MLH1) and transcriptional inactivation (as BRCA1) in a testicular biopsy were examined by fluorescence immunostaining.

Results: In the oligospermia patient, 35.4% of spermatocytes were in zygotene phase compared with 5.2% in controls. The patient had a significantly reduced recombination frequency with mean of 45.9 MLH1 foci/cell compared with 47.8 in controls. In the patient, chromosome 4 in all pachytene cells displayed loop formation with varying degrees of unpaired regions. BRCA1 localized along asynapsed regions regardless of XY body association.

Conclusions: Ring chromosome 4 might affect the progression of meiosis I prophase, synapse formation, and transcriptional activation of asynapsed areas, and impair male fertility.

Keywords: Ring chromosome 4; oligospermia; synapse complex; recombination; transcriptional inactivation

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AB189. Therapeutic potential of adipose-derived stem cells based micro-tissues in a rat model of post-prostatectomy erectile dysfunction

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