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Clinical outcome of transferring embryos diagnosed as chromosomal mosaicism by next generation sequencing method

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We retrospectively examined the results of preimplantation genetic testing for aneuploidy (PGT-A) conducted at our clinic to clarify clinical pregnancy rate and miscarriage rate of embryos diagnosed with mosaic. The average age of the wives of the 183 couples who received PGT-A was 39 years. Trophectoderm cells were biopsied from 840 blastocysts, and chromosomal analysis by next generation sequencing yielded 215 euploid embryos (A), 81 mosaic embryos (B), and 544 aneuploid embryos. The proportion of B embryos was 9.8%. The outcomes of the 147 A embryos transferred were as follows: clinical pregnancy rate (PR) was 53% and miscarriage rate (MR)was 6%. The outcomes of 24 B embryos transferred were 45% for PR and 18% for MR. No chromosomal aberrations were reported in eight babies born after mosaic embryo transfer. Mosaic embryos are relatively frequent, and clinical judgement on whether to transfer them is difficult. This study shows the clinical outcome of transferring mosaic embryos is not much different from that of euploid embryos, although rate of miscarriage rises slightly. Many embryos with segmental mosaic or low-frequency mosaic led to live births.