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Poster Presentations

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Cytogenetic study of poor quality embryos not transferred in in vitro fertilization compared with control group

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Background: An association between morphology, and geneticintegrity in human embryos is stablished, but this relationship is not absolute.

Objective: This study investigated the correlation between embryo morphological characteristics and chromosomal status in biopsied human embryos, using the array comparative genomic hybridization technique.

Materials and Methods: Preimplantation genetic testing for aneuploidy was performed on Day 3 embryos (n = 120) divided into two groups: 60 'deselected' embryos (unsuitable for transfer or vitrification) versus 60 'selected' embryos (suitable for transfer or vitrification). The morphological grading criteria, including blastomere number, symmetry, percentage of fragmentation rate, and zona pellucida appearance were correlated with array comparative genomic hybridization results.

Results: The incidence of chromosomal abnormalities was significantly higher in embryos with uneven blastomeres, fragmentations, and thick zona pellucida appearance.

Conclusion: In general, embryo selection based of morphological assessment cannot confirm the chromosomal integrity. However, some morphological parameters reflect the cytogenetic status of the deselected embryos.

Key words: *Aneuploidy, Embryo morphology, Fragmentation.*