CHROMOSOMAL MOSAICISM DETECTED DURING PREIMPLANTATION GENETIC SCREENING: RESULTS OF A WORLDWIDE WEB-BASED SURVEY

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Abstract Body

Objective: To evaluate the extent of mosaicism in preimplantation genetic screening (PGS) in clinical practice and to gain insight on the practices and views regarding this issue.
Method: A prospective, 20-item web-based questionnaire with questions related to practices and views regarding mosaicism in PGS.
Results: A total of 102 IVF units from 32 countries performing 108,900 IVF cycles annually responded to the survey. More than half responded that embryonic mosaic aneuploidy is reported by the laboratory but 31.9% stated that samples are reported as euploid or aneuploid only. If mosaic aneuploidy is reported, 46% stated that it was present in ≤10% of the embryos. More than two thirds were of the opinion that next generation sequencing (NGS) is required to reliably detect mosaicism. Among centers performing PGS, 47.9% consider embryonic mosaicism when detected in > 20% of the cells and nearly two thirds believe that mosaic aneuploid embryos should be stored for potential therapeutic use following extensive and appropriate counselling.
Conclusion: Mosaicism has always existed in preimplantation embryos and new technoliogies can now detect its presence. More studies are needed before definite conclusions can be drawn.