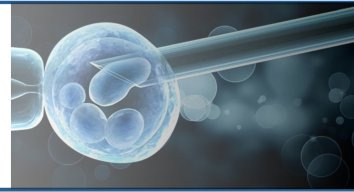


Preimplantation Genetic Diagnosis

Legislations & Ethics

Martínez Plana, Maria. Genetics degree final project (UAB). Prof. Josep Santaló Pedro



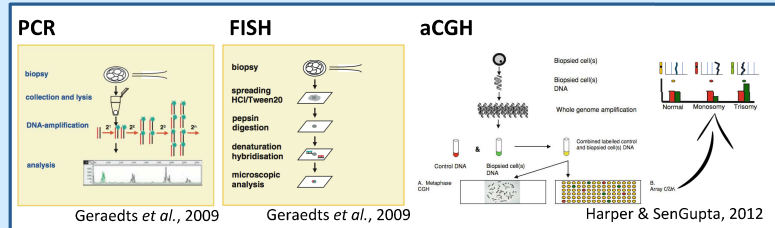
Introduction

Preimplantation genetic diagnosis (PGD) is the process of testing preimplantation stage embryos or oocytes for well-defined genetic defects. It has been developed for couples whose potential offspring are at risk of severe mendelian disorders, structural chromosome abnormalities or mitochondrial disorders, and as an alternative for pre-natal diagnosis and selective termination pregnancies. As a reproductive technology involving embryo selection, PGD has been associated with a wide range of controversies. The aim of this project is to analyse the ethical and social issues related with PGD, as well as its legislation in different countries.

In vitro diagnostic procedures

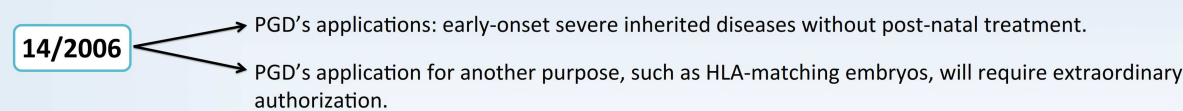
	Polar body biopsy	Blastomere biopsy	Blastocyst biopsy
Day of extraction	1 st polar body: pre-fertilization 2 nd polar body: post-fertilization	After 3 rd division (3 rd day after insemination)	5 th or 6 th day after insemination
Removed cells	Polar body	1 blastomere	Blastocyst cells
Analysed material	Maternal	Maternal/paternal	Maternal/paternal

Analysis techniques

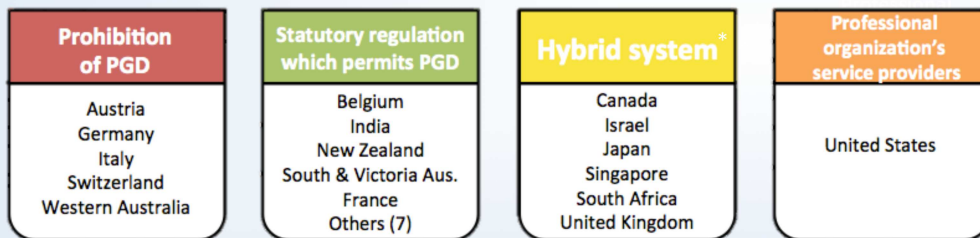


Spanish legislation and its comparison with other countries

In Spain, PGD is regulated by human assisted reproduction techniques' law 14/2006.



Worldwide, PGD is usually addressed in a wide regulatory scheme. Four approaches can be observed:

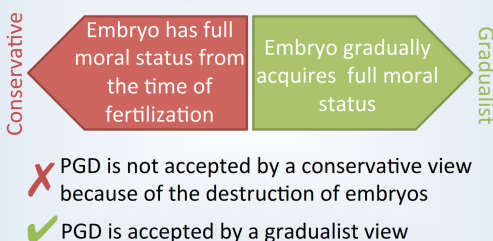


*General legislative framework + authority's professional guidelines

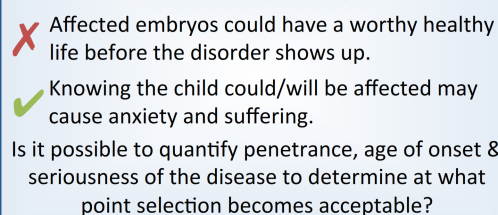


Ethic controversies & concerns

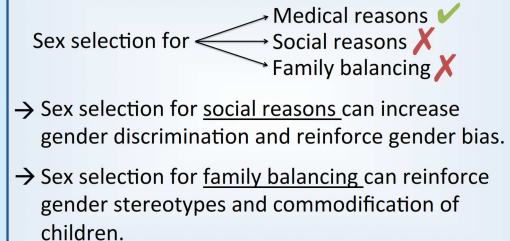
Does the embryo have full moral status?



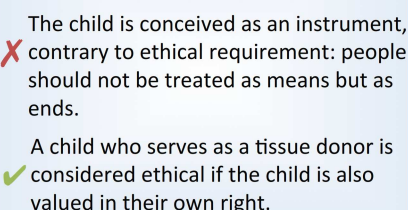
Should we use PGD for late-onset diseases and susceptibility disorders?



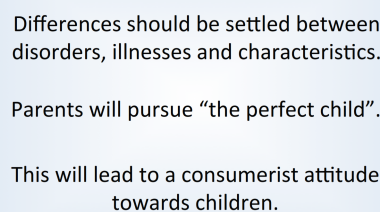
Where is the limit in sex selection?



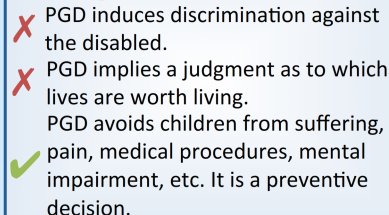
Are HLA-matching embryos used as an instrument?



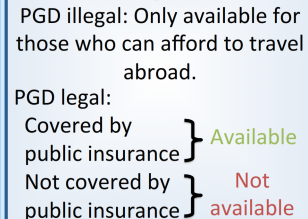
Slippery slope argument



Does PGD have a bad-side effect against the disabled?



Is PGD available for everyone?



Conclusions

PGD is globally controversial in terms of ethics and legislation. Further debate is needed to agree the applications and limits of this technique to prevent misuse.

Bibliography

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John A. Robertson, 1998. *Ethical Issues And Practical Problems in Preimplantation Genetic Diagnosis.*