



Title	Should One or Two Embryos Be Transferred in IVF? – A Health Technology Assessment
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Aim

To describe the scientific knowledge and to contribute information on the obligatory single embryo transfer (SET) policy in Denmark; to evaluate if a SET policy compared with the present double embryo transfer (DET) policy would reduce the chance of pregnancy; to identify what the attitudes of the infertile couples are to SET and fewer twin pregnancies and what the organizational and economical consequences would be.

Conclusions and results

All previous randomized studies have shown that elective single embryo transfer significantly reduces the pregnancy rate per fresh cycle. The present randomized study did not reveal any difference. Observational data from other studies have indicated that it is possible to maintain unchanged pregnancy rates following introduction of SET to selected patient groups. Previous studies and our own data on patient attitudes revealed a strong desire for twins among couples undergoing fertility treatment. An enforced single embryo transfer policy would be in conflict with patient interests and wishes.

Introduction of SET seems to necessitate employment and education of extra staff and seems to represent a change in public expenses for health care associated with in-vitro fertilization (IVF). A SET policy will create greater challenges for information and counseling concerning the choice of one or two embryos. The SET policy was not found to be more cost effective than the DET policy, which is more effective (higher clinical pregnancy rate, higher rate of delivery and children), but also more expensive (higher delivery cost and neonatal intensive care costs). The extra costs per delivery and per child born with DET do not appear to be high.

Recommendations

Respect for patient autonomy should be considered against economic aspects. Complications and long-term sequelae associated with preterm delivery derived from twin pregnancies should also be taken into account.

Methods

The project was based on the framework of health technology assessment (HTA). An analysis of the literature and a randomized study elucidated whether one or two embryos should be transferred in IVF. Patient attitudes toward this question were found through a literature search, a qualitative interview study, and by a mailed survey. The organizational consequences of introducing SET were analyzed in terms of changes in organizational processes. A health economic analysis was used to evaluate the potential economic consequences.