

Present Role of Stem Cells for Fetal Genetic Therapy

This Committee opinion has been prepared by the Genetics Committee and approved by the Executive and Council of the Society of Obstetricians and Gynaecologists of Canada.

PRINCIPAL AUTHOR

R. Douglas Wilson, MD, FRCSC, Philadelphia PA

GENETICS COMMITTEE

R. Douglas Wilson (Chair), MD, FRCSC, Philadelphia PA

Valerie Desilets, MD, FRCSC, Montreal QC

Alain Gagnon, MD, FRCSC, Vancouver BC

Anne Summers, MD, FRCPC, Toronto ON

Philip Wyatt, MD, PhD, Toronto ON

Victoria Allen, MD, FRCSC, Halifax NS

Sylvie Langlois, MD, FRCPC, Vancouver BC

3. Fetal therapy using stem cell replacement has been successful for immunodeficient conditions following early prenatal diagnosis for the "at risk" fetus.
4. Other conditions such as hemoglobinopathies, inborn errors of the metabolism and hemophilia require more research to overcome biological barriers.

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Abstract

Objective: To provide a Committee opinion on the present status and role of stem cells in fetal genetic therapy.

Options: Limited to discussion of new genetic information and technology related to stem cell therapy.

Evidence: MEDLINE search to identify publications related to this topic after 1980. This document represents an abstraction of the information.

Value: This Committee opinion is a consensus of the Genetics Committee of the Society of Obstetricians and Gynaecologists of Canada (SOGC).

Benefits, Harms, and Costs: The benefit of this update is to educate the reader about genetic stem cells and their use in fetal therapy. At present there is no harm or cost (research with limited clinical application) identified.

Conclusions:

1. Stem cell therapy has the potential to be a powerful and successful therapy for certain human conditions.
2. There are significant ethical issues related to the use of stem cells derived from embryonic tissue.

Key words: Stem cell, embryonic tissue, prenatal therapy, immunodeficiency

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