

Ethical and legal aspects of some assisted reproductive techniques

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Abstract:

Assisted reproductive technology (ART) is the techniques used to help infertile couples or individuals to conceive children. This literature review was done to discuss the ethical and legal aspects of four assisted reproductive techniques which are in vitro fertilization (IVF), surrogate mother, artificial insemination, and mitochondrial replacement therapy. In vitro fertilization is the procedure in which a few ova are taken from the potential mother and some sperm is taken from the potential father, then the sperm is let to fertilize the ova on a laboratory plate⁽²⁾. This method is legal in most of the countries around the world with some restriction in Islamic countries. Some of the ethical issues raised by this technique include the policies regarding what to do with unused embryos⁽³⁾. Surrogate mother is a woman that carries the fertilized egg of the potential parents. The ethical problems raised by this technique include the fact that there is no guarantee that the surrogates and donors understand the risks involved in the procedure⁽⁵⁾. Artificial insemination is the oldest method of the mentioned ones it involves injecting semen from the donor in the vagina of the potential mother. Issues regarding this method include the possibility of transmitting HIV between the donor and the recipient⁽⁴⁾. Mitochondrial replacement therapy which is a relatively new method it involves fertilizing an egg from the potential mother by a sperm from the potential father then taking the nucleus of the fertilized egg and placing it inside an ovum, which is obtained from a donor, after removing its nucleus. This technique is very promising for women who suffer from mutations in mitochondrial DNA. However, this technique rises several ethical issues that include the question about whether it is ethical to do experiments of the unborn children, in addition to the controversy of having three different genetical parents (because the nuclear DNA is from genetic material of the couple while the mtDNA is from the egg donor). In conclusion assisted reproductive technology (ATR) is a very promising field of research and more research should be done it especially regarding mitochondrial replacement therapy⁽¹⁾.

Key words: assisted reproductive technology (ART), in vitro fertilization (IVF), artificial insemination, surrogate mother, mitochondrial replacement therapy.

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