

Ethical aspects of human reproduction

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Introduction

Definition

- **Reproduction** = process by which living beings transmit their **genes** and **give birth** to a **new generation** of **living beings** (processus par lequel les êtres vivants transmettent leurs gènes en donnant naissance à une autre génération d'êtres vivants).
- The act or process of reproducing, is specifically the process by which plants and animals give rise to offspring and which fundamentally consists of the segregation of a portion of the parental body by a sexual or an asexual process and its subsequent growth and differentiation into a new individual.
- **Synonyms:** duplicate, copy, replica

Introduction

- Life depends on the presence of DNA and its family of genes. The process of reproduction makes it possible for living beings to transmit their genes to the next generation of life. There are essentially two types of reproduction: **asexual reproduction**, which requires only one parent, and **sexual reproduction**, which requires two parents.
- As far as human reproduction is concerned, the act is sexual and naturally requires two parents from different sex (male and female).
- However, the technological advancements achieved in the past centuries in the area of reproductive health care have also led to the evolution of very important ethical issues that will have to be dealt with in the current and the coming centuries. In other words, there is nowadays a strong violation of the concept «reproduction» due to new technologies, which needs to be moderated.

Introduction

- Sometimes these new technologies are important, and sometimes they are not at all!
- That is why it is important to pass in review the ethical aspects of such methods.

Ethical aspects of abortion

- Medical abortion
- Other
 - Abortion continues to raise a number of ethical issues related to the rights of the women versus the rights of the foetus, which, in addition to the risk of Sexually Transmitted Diseases (STD) including the Human Immunodeficiency Virus (HIV), emphasize the need for adequate family planning and sexual education.

The key question: when does human personhood start, and how do we proceed when there is no consensus?

Ethical aspects of abortion

- **The ethical problem**: when, if ever, is an abortion the right alternative (comparative rights)?
- Beliefs of religious groups:
 - **Roman Catholic Church beliefs:**
 - Evolution of Roman Catholic positions on abortion
 - Current Catholic Church teaching (sanctity of human life)
 - Exceptions to the Roman Catholic ban on abortion

In 1982, the late Pope John Paul II said, in a speech pertaining to embryonic experimentation: « I condemn in the most explicit and formal way, experimental manipulation of the human embryo, since the human being, from conception to death, cannot be exploited for any purpose whatsoever ».

Ethical aspects of abortion

- **Other religious and ethical matters :**

- Jewish beliefs on abortion
- Muslem beliefs

If the pregnant woman's life is at risk, then, arguably, abortion could be viewed as the **lesser of two evils**. The **Principle of Double Effect** could thus be applied, as the intent of the abortion would be to preserve the life of the woman, and the death of the foetus would be a secondary consequence of this attempt.

The Catholic Church accepts the Principle of Double Effect when the death of the foetus is a secondary effect of treating the mother:

- For exemple, chemotherapy for cancer treatment may cause a miscarriage, and surgical removal of an ectopic pregnancy results in the death of the embryo.
- However, direct abortion with a side effect beneficial to the mother violates the Principle of Double Effect. So abortion prior to chemotherapy or **Methotrexate** for ectopic pregnancy are not acceptable.

Ethical aspects of abortion

- According to **the theory of natural law**, reproduction is acknowledged to be inherent component of the natural human condition (fertilization, differentiation and birth are all a part of the natural human life span), and, thus, abortion is counter to this design.
- Nevertheless, abortion can be seen as a futherance of the human ability to reason. The aforementioned **Principle of Double Effect**, in addition to proportionality, can also be used to justify abortion.

Medically Assisted Procreation (MAP)

- The MAP relates to all the techniques designed to help infertile couples to conceive outside the natural union and obtain a successful pregnancy. These techniques refer to a terminology and to acronyms, of which a non-exhaustive list is shown below
 - **IVF**: In Vitro Fertilization
 - **IUI**: Intra-Uterine Insemination with the husband's sperm
 - **AID**: Artificial Insemination with a Donor sperm
 - **ICSI**: Intracytoplasmic Sperm Injection
 - **MESA**: Microsurgical Epididymal Sperm Aspiration
 - **TESE**: Testicular Sperm Extraction
 - **DEC/TEC**: Frozen-thawed Embryo Transfer

Medically Assisted Procreation (MAP)

- Intra-Uterine Insemination with the husband's sperm (**IUI**) and Artificial Insemination with a Donor sperm (**AID**) – **confidentiality: what are ethical issues?**
- **In vitro fertilization (IVF)**
- **Research on embryos: ethical matters**
 - Roman Catholic Church position and other religious beliefs.
 - Position of scientists.
 - Supernumerary embryos.
 - Preimplantation Genetic Diagnosis (PID).
 - Mothers carrier.

Genetic counselling

■ Definition

- Genetic counselling is a communication process which deals with human problems associated with the occurrence, or the risk of occurrence of a genetic disorder in a family.
- Genetic counselling involves an attempt by one or more appropriately trained persons (genetic counsellors) to help the individual or family:
 - To comprehend the medical facts, including the diagnosis, the probable course of the disorder, and the risk of management;
 - To appreciate the way heredity contributes to disorder, and the risk of recurrence in specified relatives;
 - To understand the options for dealing with the risk of recurrence;
 - To choose the course of action which seems appropriate to them in view of their risk and the family goals and in accordance with the decision;
 - To make the best possible adjustment to the disorder in the affected family member and/or the risk of recurrence of the disorder.

Genetic counselling

- Moral, ethical and philosophical aspects involved in genetic counselling are now emerging as major issues with the development of the application of various diagnostic techniques of pregnancy.
- The consultee and the counsellor are now faced with choices that were once left to fate.
- **Prenatal Diagnosis (PND)**. A proposal for guidelines for PND, genetic counselling and screening has been made. The proposal assumes that consensus exists among medical geneticists, obstetricians and parents about some key ethical principles and approaches to difficult choices:
 1. **Parental autonomy** in abortion choices;
 2. **Non-directive counselling**;
 3. **PND that must be provided** when parents need the information to prepare themselves for the birth of a possibly affected children;

Genetic counselling

■ Prenatal Diagnosis (PND).

4. **Practitioners** need to disclose to the consultee the risks and benefits of each procedure in PND;
5. **Information with XY females and XX males** with great care that casts no ambiguity on the patient's social and phenotypic sexual identity;
6. In case putative father is not the biological father of the foetus, **the mother to be informed first** to avoid social problems and she may be left to take final decision;
7. **Medical geneticists** to decide which of the disorders warrants the options of prenatal diagnosis and termination of pregnancy;
8. Consequences from the above to be evaluated in terms of basic ethical principles, and critical tests of what is best for the individuals, groups and society.

Cloning for reproduction

- The term « cloning » refers to three very different procedures with very different goals:
 - **Embryo cloning**. This is a medical technique which produces monozygotic twins or triplets, with identical DNA. This has been done for many years on various species of animals; only very limited experimentation has been done on humans.
 - **Adult DNA cloning** (**reproductive cloning**). It has been used to clone a sheep and other mammals: the DNA from an ovum is removed and replaced with the DNA from a cell removed from an adult animal. Then the fertilized ovum, now called a pre-embryo, is implanted in a womb and allowed to develop into a new animal. It had not been tried on humans. It is specifically forbidden by law in many countries.
 - **Therapeutic cloning** (biomedical).

There are major ethical concerns about all three types of cloning, when applied to humans.

Cloning for reproduction

- Human cloning and human dignity: an ethical item.
 - Nature itself is the greatest cloning agent. In some human conceptions, the fertilized ovum splits for some unknown reason and produce monozygotic (identical) twins. Each has a genetic makeup identical to the other.

Marriage of homosexuals

■ **Children adoption**

- Why?
- Recruitment of future homosexuals?
- Altruism?
- Liberty on sexual orientation and preference?
- Which education?

■ **Cloning**

- Homosexual gene?
- Homosexual making?

Conclusion

Ethical issues of human reproduction are numerous, let us just bring to a close with some of them.

- Moral problems arise constantly in social life with the need to resolve conflicts between moral rules and principles to help, regulate and modify desires.
 - For exemple, abortion choices after PND present difficulties and dilemmas for several reasons.
- As a result, no consensual definition, neither scientifically nor legally, of when life begins exists. Two main views about the moral status of the embryo and thus regarding the legal protection afforded to them with respect to scientific research exists:
 - Human embryos are not considered as human beings and consequently have a relative worth of protection;
 - Human embryos have the same moral status as human beings and consequently are equally worthy of protection.

Conclusion

- Application of science and scientific principles has two faces. To decide the correct use, man must deal with his conscious, individual and social status and the ethics underlying the applications.
- Genetic counselling is a practical method of calculating risk figures, intended for information regarding the unborn, and we ought to use it in an efficient manner but in a direction, which our ethics and morality point to.
- The decision taken by the parents after the counselling session must leave them satisfied instead of placing them in a state of dilemma.

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