Ministry of Public Health of Ukraine
"Ukrainian Medical Stomatological Academy"

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METHODICAL INSTRUCTIONS
FOR INDEPENDENT WORK OF STUDENTS DURING PREPARATION
TO PRACTICAL (SEMINAR) CLASSES AND IN CLASS

Academic subject	Safety of Vital Functions. Bioethics
Module No 1	Safety of Vital Functions. Bioethics
Topic	Bioethical and legal problems of human reproduction and genetic technologies, transplantation and transfusion of blood
Year of study	I
Faculty	Dental, Medical
Number of academic hours	2

Poltava – 2020

1. Relevance of the topic

The inability to have a child is a true burden. Would-be parents often ask both God and themselves why their innate desire to have children continues to be unfulfilled. This kind of self examination reflects how deeply emotional and traumatic infertility can be.

2. The specific aims:

1. To obtain a general view of medicinal forms and peculiarities of prescribing them:
   - To learn the basic knowledge in reproduction technologies.
   - To learn the basic knowledge in ethical issues of reproduction technologies.
   - To learn legal and medical issues in reproduction technologies.
2. To know the additional inscriptions and prescriptions

3. Basic knowledge and skills necessary to study the topic (inter-disciplinary integration)

The preceding subjects	The acquired knowledge
History of medicine, Philosophy, Clinical subjects	Historical aspects of the formation of the medical profession, Bioethics and deontology as components of a successful doctor's work

4. The task for students individual work

4.1. The list of basic terms, parameters, characteristics which the student should master while preparing for the class.

Term	Definition
Reproductive Technologies	encompasses all current and anticipated uses of technology in human and animal reproduction, including assisted reproductive technology, contraception and others
Surrogate Motherhood	is an arrangement or agreement whereby a woman agrees to carry a pregnancy for another person or persons, who will become the newborn child's parent(s) after birth.

4.2. Theoretical questions for the class (to the topic):

1. Reproductive Technologies.
2. Ethical issues of reproduction technologies
3. Care of Multiple Embryos
4. Use of Donor Eggs/Sperm
5. Surrogate Motherhood
6. Financial Implications

The content of the topic:

An Ethical Perspective on Reproductive Technologies

Sometimes a couple may even keep the situation secretive to avoid embarrassing themselves in front of family and/or friends.

Sadly, this response only serves to heighten the pain that many couples experiencing infertility feel. 15 % of couples in the United States cannot have children after one year of sexual relations. As a result, clinics specializing in aiding the reproductive process have sprung up all over the country. Couples spend many thousands of dollars to increase their *chances* of having a child.

There are several reproductive technologies which are currently in use, including fertility drugs, artificial insemination, in vitro fertilization (IVF), use of a surrogate mother, gamete intrafallopian transfer (GIFT), zygote intrafallopian transfer (ZIFT), and intracytoplasmic sperm injection (ICSI). Although these technologies are all different from each other, they all raise certain ethical issues which should concern anyone considering them. The issues as developed here should be nuanced by the fuller explanations in the book *Sexuality and Reproductive Technology*.

Care of Multiple Embryos

A crucial issue in reproductive technologies is the safety of the embryos whether they are inside of a mother's body or in a laboratory. Because human life begins at conception, all embryos should be treated with the utmost care. For example:

1. A couple using IVF should decide ahead of time how many embryos to implant and attempt to create only that number of embryos. If more than the ideal number of embyros are created, the extras may be implanted with the others or frozen (to be implanted later)--whichever option poses less risk to the lives of the mother and embryos. No embryos should ever be discarded.

2. Only a limited number of embryos should be implanted following in vitro fertilization. Such an approach will decrease the chance that too many embryos will implant, thereby risking the lives of all the embryos and/or the mother.

3. A couple considering fertility drugs should research the options carefully. Some drugs may cause multiple eggs to mature rather than merely putting the body back into a normal, healthy, fertile state. Potentially harmful multiple pregnancies can result. One drug, clomiphene citrate, does not carry the risk of multiple pregnancies that some of the other fertility drugs now available do. Also, the multiple pregnancy risk can be minimized with the use of ultrasound to monitor the maturing egg(s). With monitoring, multiple pregnancies can be avoided.

4. Selective reduction (abortion of some implanted, developing embryos so the others have a better chance to survive) is not an ethical option. However, selective reduction should not be necessary if an appropriate number of embryos are implanted in the first place.

5. A couple should only consider implantation procedures whose percentage of success is equal to or greater than that of unassisted natural implantation. Otherwise, embryos are being placed at greater risk than is normally the case in human reproduction.

Use of Donor Eggs/Sperm

It is not advisable to use donor eggs and/or sperm in any reproductive technologies for a variety of reasons:

1. Who are the parents? Are they the ones whose genetic material (sperm and egg) combine to form the child or the people who raise the child? This question might be a simple one for the parents caring for the child, but how simple is that question from the viewpoint of the child? Sometimes, legal battles even result between the sets of parents involved in one child's life.

2. Should children know that one or both of his or her (rearing) parents did not provide the egg or sperm which brought them into being? Should children have access to the donor(s) (genetic parents)? Should genetic parents have visitation rights?

3. A distinctive imbalance may be introduced into a marriage where donor eggs or sperm are used in place of one parents eggs or sperm. There is the possibility of resentment from the partner whose eggs or sperm were not used. ("You take care of her! She's your child.") Accusations of unfaithfulness can result because, in a real, genetic sense, one of the spouses has had a child with another person. Emotional attachment to the "mystery person" can also develop in the spouse who genetically had the child with the donor.

4. These and other difficulties flow from violating the "one flesh" model of marriage in Scripture, in which children are literally to be the result of the two married parents (and their eggs and sperm) becoming "one flesh".

Surrogate Motherhood

The most common form of surrogacy involves inseminating the surrogate with the husband's sperm--generally because the wife cannot carry a child through pregnancy. Such an arrangement should be avoided because a donor egg is involved, as explained above. Even when a donor egg is not involved--e.g., when the husband's sperm and wife's egg are joined *in vitro*--the bonding problems discussed below generally make such an agreement unwise. Particularly problematic are commercial arrangements in which surrogates receive payment for producing a child beyond expenses they incur. Like the selling of organs, such arrangements wrongly commercialize the body. In fact, financial contracts essentially entail the purchasing of the baby and imply an unacceptable form of ownership of human beings. Less problematic are altruistic surrogacies such as rescue surrogacies where a woman acts to save an embryo that would otherwise be destroyed.

Bonding

Whenever donor eggs/sperm or a surrogate are used, the question of bonding can affect all parties involved. Bonds can develop between child and genetic parent(s), between surrogate mother and child, and between the genetic parents. The risk that inappropriate bonds will be created through the reproductive process is very real and can cause many problems. On many occasions, surrogate mothers have sued the genetic parents for custody after the baby was born or for the right to abort a malformed fetus even though the genetic parents wanted the child to live.

Financial Implications

Undergoing reproductive treatments is very costly. *In vitro* fertilization costs between $10,000 and $20,000. Surrogacy can cost between $20,000 and $40,000. And these treatments do not guarantee that a child will result. In fact, clinics average only 20-40% live birth success rates. However, these success rates are most likely this high due to the implantation of multiple embryos and selective abortion which is very problematic ethically. Following ethical guidelines that protect human life from conception would probably make the percentage much lower.

Prudence

One serious consideration should be the prudence of seeking to have a child with reproductive technologies when the costs and/or risks are so great. There are two primary concerns:

1. The money could go towards meeting another great need. It can be difficult to imagine anything more important than the creation of life. However, we also have a responsibility to be concerned about those people already in the world today. There are people in many parts of the world without adequate medical care. For example, it costs just pennies per person to inoculate them against many of the world's greatest killers.
2. Adopting a child is often an option for people to consider. It's true that it is difficult to adopt in some countries, but international adoption is gaining popularity because of the number of orphaned children and speed with which the adoption process can often be completed. There are many children in the world in need of a home. In Cambodia, many children have been orphaned through years of war. In China where the government allows parents to have only one child, many female babies are left with orphanages by parents who want a boy. In Bulgaria, a reported average of 90% of the many children in orphanages will become criminals unless they are adopted. Those who are able should investigate the possibility of international adoption before ruling it out.

Conclusion

Many people experience a very natural urge to be parents. Some are seeking to satisfy this urge using reproductive technologies without fully understanding all their implications. Before using technological methods of reproduction, it is wise to study in-depth the available options, understand the ethical issues involved, and above all, seek the will of God before moving ahead.

Tasks for self-check:

Choose the correct answer:

INDICATIONS "SURROGACY" ARE
concomitant diseases in which pregnancy impossible
acute inflammatory disease of the reproductive system
disability man
reluctance of women to bear pregnancy
immunological incompatibility

WHAT ARE THE INDICATIONS FOR "SURROGATE MOTHERHOOD"?
repeated attempts failed ECO embryos in multiple receiving high quality
acute inflammatory disease of the reproductive system
disability man
reluctance of women to bear pregnancy
immunological incompatibility

JUSTIFIED IN VITRO FERTILIZATION
immunologic incompatibility

wish the couple to have a child of a particular sex
absence of uterus (congenital or acquired)
obliteration of the uterine cavity
comorbidity in which pregnancy impossible

WHEN ARTIFICIAL INSEMINATION IS JUSTIFIED? AT
presence of unforeseen obstacles at the confluence of male and female sexual gametes
wish the couple to have a child of a particular sex
absence of uterus (congenital or acquired)
obliteration of the uterine cavity
comorbidity in which pregnancy impossible

WOMEN PARTICIPATING IN THE PROCEDURE OF ARTIFICIAL INSEMINATION HAS THE RIGHT TO INFORMATION:
the procedure of artificial insemination
about the financial status of the donor
the social status of the donor
the level of intellectual development donor
of residence donor

References:

Basic.

Nelson, S. M.; Telfer, E. E.; Anderson, R. A. (2012). "The ageing ovary and uterus: New biological insights"

Additional.

MacRae, Fiona (February 1, 2008). "Scientists turn bone marrow into sperm". The Courier and Mail (Australia — Feb. 2008).

The methodical guidance has been compiled by Lienkova O.O.