Natural/mild assisted reproduction technologies: reducing cost and increasing safety

Women's HEALTH

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Professor Adamson presents an interesting and comprehensive review that puts assisted reproduction technologies (ART) in a global context [1]. It is clear that different cultural and socioeconomic factors determine whether ART is made available in the public sector in different parts of the world. The cost of ART, the complexity of the procedures, the complications of treatment and the increased incidence of multiple pregnancies are predominantly responsible for limited public funding in many countries. The current protocols for ART are too expensive and, therefore, it is not feasible to apply them to a wider community, especially in developing countries.

> "We should promote a more physiological, less drug-oriented, lower risk, less expensive and more patient-friendly approach to assisted reproductive technologies."

Religious views on fertilization outside the body and controversies concerning the moral status of the embryo have persuaded some governments to ban ART treatment. There are also ongoing concerns regarding the health and welfare of women and children following ART. The International Society of Fertility Studies (IFFS) and International Committee Monitoring Reproductive Technologies (ICMART) are involved in global surveillance regarding these issues.

Developing countries

Infertility in developing countries has many dimensions. The factors that affect the prevalence of infertility include sociocultural, economic, demographic, ethnic and religious factors, in addition to reproductive health issues.

Tubal infertility dominates the causes of infertility owing to the impact of sexually transmitted diseases and postpartum and postabortion infections. It is therefore essential to consolidate strategies to make ART safer, cheaper, less stressful and accessible to all without compromising success rates. Reducing the number, cost and stress of visits would have specific economic and sociocultural benefits in a developing world setting, where the infertile woman is frequently stigmatized and isolated. Mild approaches in ART will help to reduce monitoring because the risk of ovarian hyperstimulation syndrome is minimized.

Pretreatment counseling and education of couples to optimize bodyweight, nutritional status and psychosocial issues should be an integral part of any program.

Reducing cost & increasing safety of ART

I believe that there should be a movement among fertility doctors towards reducing costs and complications of ART in order to increase affordability and access in both the developing and developed world. We should promote a more physiological, less drug-oriented, lower risk, less expensive and more patient-friendly approach to ART.

Role of natural/mild ART

Advances in embryology, ultrasound technology and endocrinology will make the natural cycle/minimal stimulation (mild) IVF more successful and increasingly relevant to everyday practice [2]. Natural cycle IVF could be offered at a low cost in consecutive cycles [3].

Modified natural cycle IVF could be made more successful by using gonadotropin-releasing hormone antagonists to block ovulation. Successfully obtaining a single healthy oocyte and embryo through this method should be more acceptable in countries and communities where there is a religious or moral objection to creating surplus embryos. Furthermore, mild ovarian stimulation for IVF reduces aneuploidy in human pre-implantation embryos compared with conventional stimulation for IVF [4].

Mild ART using fewer drugs at lower dosages in a woman's own menstrual cycle has been demonstrated to be effective with significantly less clinical and psychological adverse effects for women. Elective single embryo transfer in mild ART would not only reduce multiple births but would also reduce the cost of the treatment. In the long term, mild ART will have significant

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benefits in terms of the health of women and children, owing to the reduction in ovarian hyperstimulation syndrome, patient discomfort during treatment and risks of multiple births [5].

Reproductive tourism

International reproductive tourism is currently widespread, especially in Western Europe where couples travel to countries where treatment is less expensive and the regulatory framework is lax or nonexistent. This is especially true in areas where oocyte and sperm donors and surrogacy are easily available. Unfortunately, in countries that do not have a regulatory framework, there is little to safeguard the health and welfare of women, offspring and families. Commercial interests in the private sector seem to dictate the provision of ART. The data collection for outcome and complications of ART becomes unreliable in this situation. International reproductive tourism is increasingly becoming a major concern for couples who are putting themselves in a situation where they can be exploited.

Professional & public responsibility

In order to address the issues that have been presented in this article, a co-ordinated, mature, proactive approach is needed to make ART affordable in order to increase its accessibility globally. To achieve this, health professionals will need to work with governments and the voluntary sector in order to raise public and political awareness and increase funding. The International Society for Mild Approaches in Assisted Reproduction (ISMAAR) [101] and the European Society of Human Reproduction and Embryology (ESHRE) [102] are actively promoting projects to increase safety, affordability and access to ART in developing countries and across the world.

Prevention is better than cure

Finally, the changes outlined in this article must be placed in the context of a structured community-based initiative on reproductive health as outlined:

- Stronger emphasis on the protection of reproductive health in secondary school curriculum, based on a 'prevention is better than cure' approach;
- Preconception care clinics must be established within communities and health services specifically designed to educate men and women on factors affecting their fertility and to help them help themselves to conceive naturally;
- Ongoing fertility awareness programs for communities funded by nongovernmental organizations or local governments in conjunction with the local voluntary sector. A tailored and sensitive program would enhance the effect in a multicultural population;
- Provision of safe, mild and cost-effective ART with single embryo transfer would help to offer more treatment cycles within the budget available. This would save costs associated with drugs, hospital admissions for ovarian hyperstimulation syndrome and multiple pregnancies.

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