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IVF: EVEN MIRACLES TAKE A LITTLE TIME

Nursing

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ABSTRACT

Infertility is a central issue in the lives of many couples who suffer from it. In resource poor countries the problem of childlessness is even more pronounced compared with Western societies owing to different sociocultural circumstances. It often leads to severe psychological, social, and economic suffering, and access to infertility treatment is often limited to certain procedures and certain customers. The issue of infertility in such countries is underestimated and neglected, not only by local governments but also by the international nonprofit organizations. Simplification of the diagnostic and therapeutic procedures, minimizing the complication rate, and incorporating fertility centers into existing reproductive healthcare programs are essential measures to take in these countries if infertility treatment is to be accessible for a large part of the population. For reasons of social justice, a search for strategies to implement simplified methods of infertility diagnosis and treatment is urgently warranted

KEYWORDS

INTRODUCTION:

In vitro fertilisation (IVF) is a process by which an egg is fertilised by sperm outside the body: in vitro.IVF is a major treatment for infertility. The process involves monitoring and stimulating a woman's ovulatory process, removing ovum or ova (egg or eggs) from the woman's ovaries and letting sperm fertilize them in a fluid medium in a laboratory. The fertilized egg (zygote) cultured for 2-6 days in a growth medium and is then transferred to the mother's uterus with the intention of establishing a successful pregnancy. The first successful birth of a "test tube baby, "Louise Brown, occurred in 1978.

The idea of treating childlessness often evokes discomfort and disbelief in Western countries. According to many, education, family planning, and maternal care programs are the only valuable options to improve reproductive health care, leaving little room for other initiatives. On the other hand, negative psychosocial, sociocultural, and economical consequences of childlessness are often more pronounced compared with Western societies. Childlessness may create broader problems in terms of stigmatization, social isolation, economic hardship, and even suicide, especially for women,[1] In vitro fertilization (IVF) is one of the newest techniques for treatment of infertility. While the medical aspects of IVF have been extensively reported, little research has explored this procedure from the couple's point of view. A descriptive study was done on 28 couples who had experienced at least one IVF procedure were interviewed. The results indicate that while IVF offers hope for infertile couples, the procedure, if unsuccessful, can be emotionally traumatic. In addition, the results suggest that comprehensive anticipatory information and emotional support are the primary needs of couples undergoing IVF.[2]

Receiving a diagnosis of infertility is a significant life crisis, and subsequent in vitro fertilization (IVF) treatment presents a physical and psychological challenge for many patients.[3]

Pain of IVF failure

There are 14% of Indian populations affected by infertility, yet most suffer in silence. Women often feel isolated and inadequate - something not helped by pictures of 'perfect motherhood' in the media and on social platform.

The inability to conceive children is experienced as a stressful situation by individuals and couples all around the world. The consequences of infertility are manifold and can include societal repercussions and personal suffering. Advances in assisted reproductive technologies, such as IVF, can offer hope to many couples where treatment is available, although barriers exist in terms of medical coverage and affordability. The medicalization of infertility has unwittingly led to a disregard for the emotional responses that couples experience, which include distress, loss of control, stigmatization, and a disruption in the developmental trajectory of adulthood. Evidence is emerging of an association between stress of fertility treatment and patient drop-out and pregnancy rates.[4]

IVF failure is a problem for a couple in the singular but can be a tragedy in the plural. Recurrent IVF failure has multiple known causes but many which are not routinely considered as part of the post treatment analysis. The reason is there are several causes associated with lifestyle and other causes related to pre-existing conditions that have only a tenuous or no apparent connection to fertility. A article was examines the impact of obesity, cigarette smoke, uterine anatomy, body mass index, thyroid dysfunction, immune factors, the hereditary and acquired thrombophilias, and embryo transfer technique on recurrent IVF failure.[5]

A Study was conducted to check the Effects of sub fertility cause, smoking and body weight on the success rate of IVF and the result showed For male subfertility the delivery rate per cycle was significantly lower than unexplained subfertility, OR of 0.70 (95% CI 0.57–0.86); for tubal pathology, the delivery rate was slightly lower, OR = 0.86 (95% CI 0.70–1.01). Smoking was associated with a significantly lower delivery rate was slightly lower; for OR = 0.72 (95% CI 0.61–0.84) and a significantly higher abortion rate compared to non-smoking delivery rates of 21.4% and 16.4%, respectively (P=0.02). Women with a BMI of ≥27 kg/m^2 had a significantly lower delivery rate, with an OR of 0.67 (95% CI 0.48–0.94), compared with normal weight women (BMI ≥20 and <27 kg/m^2).[6]

If patient had failed IVF cycle, the couple probably feeling a lot of emotions—disappointment, sadness, maybe even anger that couple didn't get the result they wanted from fertility treatment. The first measure to take is to let them grieve a bit. It's okay to feel disappointed and sad. Give them a week or so to get through this before they decide what to do next.

Another study was conducted on infertile women to assess the impact of fibroids, not encroaching the endometrial cavity, have on the rate of success of IVF, and the result showed that there were 119 cases and 119 controls recruited. The number of clinical pregnancies in women with and without fibroids was 28 (24%) and 22 (19%), respectively (P= 0.43). The adjusted odds ratio (OR) for pregnancy in affected women was 1.38 [95% confidence interval (CI): 0.73–2.60]. The number of deliveries was 22 (18%) and 16 (13%), respectively (P= 0.38). The adjusted OR was 1.45 (95% CI: 0.71–2.94). Similar results emerged when focusing exclusively on women carrying intramural lesions (n= 80 couples). There was no significant relationship between clinical outcome and either the number or size of the fibroids.[7]

Many women who have had a failed IVF cycle will be successful on a second or even a third cycle. Not all the issues that influence IVF success can be corrected, but some can be addressed to help make the next cycle more likely to result in a 5pregnancy.[8]

Little is known about how patients cope when treatment fails and they are faced with the prospect of life without their 'own' child. Initial observations suggest that, for some, the effects can be traumatic and long lasting. Thirty-five 'narrative' interviews were carried out with patients and partners for whom treatment had failed five years previously. Transcripts were subject to formal thematic analysis. A significant factor, which emerged from a formal analysis of transcripts, was the role of 'hope'. Treatment offers the hope that they may have a child, and this provides the motivation for treatment; alongside the urgent need to pre-empt future regrets. Once the support provided by hope is removed, patients can struggle to make sense of their lives. It would appear that some form of closure regarding the ending of treatment is required. Research found some couples are able to reinvest in life goals and re-establish their relationships; however, there were a significant proportion of couples who were still struggling five years after their last attempt to adapt to life without the child they had anticipated. Many couples move onto alternative options, i.e. adoption; however, not all couples recover from the trauma of the inability to parent at will, and some relationships break down. There is an irrefutable lack of psychological support offered to couples going through assisted conception, and findings suggest indisputably that more support should be offered on a regular basis to couples going through this process and beyond.[9]

Success rate of IVF

In vitro fertilization has been successful in assisting a large number of couples to achieve a much wanted baby. Unfortunately, less than one fifth of women are expected to have a live birth after the first cycle of treatment. Multiple attempts at conception improve the chances of success, even in the normal population.

The beautiful and heart-warming giggles of an infant, the soft touch a baby's arms and legs, the way a baby's eyes open and the second they look into yours – you realize the magnanimity of the situation, of the fact that there is another human being in your life and one look at that baby, you know you will do anything in this world to protect and nurture that baby.

Treating infertility is important to many individuals-both men and women-and couples who are experiencing this unfortunate condition. Infertility is often described as an inability to get pregnant after a year of unprotected sex, or six months if over the age of 35. Those experiencing this condition should speak with a fertility specialist in their area to help determine the cause of the condition and to explore various treatment options. There are several treatments designed to help men and women overcome infertility and looking into all of one's options is often beneficial.

In vitro fertilization, or IVF, is perhaps the most well-known fertility procedure. This involves combining sperm and eggs in a dish in a laboratory to create embryos. Select embryos are then transferred to the woman's uterus where they may implant in the uterine lining and develop. When severe male infertility is present, Intra cytoplasmic sperm injection (ICSI) may be used to combat this.[10]

FROM THE MOUTH OF SUFFERER This is the case of 42-year-old Angela Nicole of St. Louis who got her real joy of pain.

Angela struggled to conceive a child for years, trying every medical treatment possible – from intrauterine insemination to finally, In-Vitro fertilization. For over a year and a half, she went through 5 rounds of IVF and as each shot caused unbearable pain, which only Angela could feel, both emotionally and physically, she hoped that her prayers and pain would be answered and she would bear the fruit of her pain. During her entire process of IVF, she saved each and every syringe and vial as a way to remind herself what she went through for this chance in life.

Most definitely, her pain and efforts culminated into the success of her conceiving and giving birth to a baby girl, Sophia, who is now 4 months old.

This case tells us that really, nothing is impossible! To be poked by needles for over a year and not giving up hope is a very brave thing to do and proves to all the other women who are trying for a time longer than this that eventually, it does lead to success.[11]

DISCUSSION

If IVF specialists are to be believed, approx 1/3 of patients with IVF have no success. However, their chances of success are not end up. Artificial Intelligence, most commonly known as AI, can be helpful in ensuring **success of IVF cycle** by flagging the most feasible embryos for better results.

For intended couples, who are trying to conceive, unsuccessful IVF cycle (three or more) is common. It results in financial, physical and even emotional pressure. This is the main reason behind the increasing demand of improvement in the procedure of IVF. Artificial Intelligence (AI) related to **infertility treatment**, is doing wonders in this domain.

Being the successful technique to cure various health care issues, AI is all set to dominate the medical domain as computational models have been developed to predict heart failure, cancer diagnosis and different others. It has been generating new insights. However, AI is not a new way as it has been into use for a long time, even for more than two decades. Different FDA Approved tests are making headlines that use different techniques to collect data over the length of the embryo's culture period and an algorithm that predicts the progress of embryo. **AI Systems for IVF** is providing better results by decreasing the failure chances to a great level. It is collecting information about the poor quality embryo that is not possible through human evaluators. Now, it is moving from theoretical and experimental to real human embryos. Use of AI for infertility care is amazing and helpful to incorporate complex database – managed in various ways – mainly for patient demographics, medical histories, per-implantation, genetic screening and pregnancy result data.

'Artificial Intelligence (AI) has potential to transform the infertility medicine domain by going beyond on less focus on embryos. It is the way to uncover new patterns to find patient data for treatment of willful infertility. Scheduling an appointment to experienced professionals is not a wrong decision to make to get the best results of IVF cycle

CONCLUSION

A baby, whether conceived at the age of 16 or at the age of 60, is always a little ball of happiness for the mother. While for some women, this happiness comes easily and unexpectedly, absolutely unprepared, there are women who have to undergo a lot of medical procedures to experience this happiness.

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