From the discovery of infertility to Medically Assisted Procreation (MAP): psychological aspects and interventions in Medically Assisted Reproduction

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Abstract. According to the estimates provided by the World Health Organization (WHO), infertility afflicts 15% of couples in industrialized countries. In Italy, based on data provided by the Ministry of Health, 30% of couples has difficulty to reproduce in a natural way and will turn to centers for Medically Assisted Reproduction. Infertility is a difficult subject to deal with mainly due to the strong emotional suffering that derives from it. For this reason, emphasis is placed on the importance of psychological support for individuals and couples who face this problem. The couple must be emotionally supported through all the stages of the process from evaluation and processing of the diagnosis to the outcome of the treatment, considering interpersonal, cultural and social dynamics, and evaluating the possible alternatives to become parents. This should happen with a bio-psychosocial approach that will make possible collaboration among the professional figures working in the field of human reproduction.

Keywords: infertility, IVF, diagnosis, stress, couple dynamics

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Introduction

Despite the attention that in recent years the media has dedicated to infertility, very few people think about it and do not expect that they will have problems starting or completing a pregnancy (Covington, 2015). In fact, men and women often underestimate their reproductive clock (Peterson, Pirritano, Tucker, & Lampic, 2012) as well as lifestyle issues that can affect fertility (smoking, body weight, alcohol, caffeine, drugs, etc.). For this reason, it is suggested that people should be encouraged to think about the goal of becoming parents in the same way as they think of other important goals of life such as education and career (Gameiro, Boivin, & Domar, 2013).

All people know that so many things can happen in their lives, but for some reason they never think that they might not be able to have a child. The inability to predict this outcome becomes a major problem for many people. There is a common belief that it is very easy for a woman to get pregnant. For this reason, when pregnancy is late to arrive the couple, which perhaps for a long time before was very careful and was using contraceptives, is often in disbelief and devastated.

Often due to multiple factors, such as the efficiency of contraception, the increase of schooling, economic conditions, job insecurity, the presence of genetic diseases, the choice of the right partner with which to start a family project, lead people to postpone the project of having a child (Covington, 2015).

Unfortunately, during the couple's life, things can happen that delay or even block plans to have a child and all the decisions so rationalized and well built regarding this possibility will lapse.

It may occur that when peple decide that they are finally ready for a child "the child is not ready for them" (Andrews, 1995).

The WHO has defined infertility as a "disease." Infertility means the inability to conceive after 1 or 2 years of frequent, regular and unprotected sexual intercourse. The patient who has never been able to conceive is considered to be suffering from primary infertility. A woman demonstrating infertility after a previous pregnancy, regardless of the outcome of the pregnancy itself, is affected by secondary infertility (ICMART, International Committed Monitoring Assisted Reproductive Tecnologies and WHO, 2009). Although the ovarian reserve presents considerable variability among women of any age, the most important factor that predicts the ability to conceive and

give birth to a healthy baby is age (Te Velde & Pearson, 2002).

Diagnosis of sterility or infertility

When the diagnosis of infertility is confirmed the following questions begin. There are many couples that face these questions. According to the estimates provided by the WHO, infertility in industrialized countries affect 15% to 20% of couples. In Italy, based on data provided by the Ministry of Health, 30% of couples have difficulty reproducing naturally and therefore will require help and will rely on centers of Medically Assisted Reproduction (ISS).

This phenomenon from the psychological and social point of view, was already described in 1975 by Menning, who defines infertility as a "life crisis" that invests on different existential levels, both for the individual and the couple, causing stress, frustration, inadequacy and loss. Most recently the definition that most emphasizes the psychological impact of infertility is the one provided by Nappi. In a 2005 article, the author writes: "Infertility is a disease characterized by the absence of the imagined child, symbolizes emptiness, it is the impossibility of giving life and of enlarging the universe of one's loved ones, it is the lack of the symbol of a family and the lack of social evidence of the choice of love of a woman and a man, it is a wound that affects the individual identity, it is a mourning difficult to process especially for the lack of a real loss, it is the inability to self-project in the future".

There are many emotions that arise from such a discovery, which all come together and create an emotional earthquake that is really heavy and difficult to manage. Menning (1975) describes a series of reactions ranging from initial surprise and shock, to denial, anger, anguish, followed by guilt, pain, and loss. The reaction to the diagnosis of infertility can be immediate or take place after many months from being diagnosed (Rialti & Ricci, 1993). The emotional shock and agitation that follows the news of being sterile causes intrapsychic and relational distress, a turmoil that often ends up in damaging the marriage, especially if this affects the communication between husband and wife (Rialti & Ricci, 1993).

Several studies on the psychosocial effects of infertility and In Vitro Fertilization (IVF) treatments pointed out the intensive distress caused by trying unsuccessfully to conceive, and the possible negative effects of infertility and IVF procedures on the woman's physical and psychological well-being, such as serious strain of marital and social relationships, personal

distress, reduced self-esteem and loss of the meaning of life (Mannarini, Boffo, Bertucci, Andrisani, & Ambrosini, 2013; Schmidt, 2009, Cousineau & Domat, 2007, Hart, 2002, Greil, 1997).

Menning, in 1984, cites behavioral reactions following diagnosis of sterility:

1. Surprise: it represents the first reaction, it feels like a violation of a normal universal right that belongs to all human beings since childhood and that was never been doubted.
2. Denial: the couple denies the condition of infertility, this type of reaction is normal if limited to a short period of time, but it becomes pathological if prolonged in time.
3. Anger: the belief of not deserving this condition causes the couple to think that they are experiencing an injustice. This reaction becomes pathological, when this emotion does not leave room for a functional reorganization of the couple, and there is a sort of intolerance and envy towards others who have children.
4. Isolation: In order to avoid occasions that recall the condition of infertility, the couple can isolate itself from social life, from the family of origin, from friends and often happens that the two spouses are isolated from each other because they prefer not to communicate about their problems of infertility.
5. Guilt: it represents a very frequent reaction for both intrapersonal and subjective level, as an accusation or sense of guilt towards the partner, an attempt to find.
6. Pain: it is the pain of a loss, mourning. The loss of a "possible life", a child that never existed, except in the couple's thoughts. A pain that is very difficult to share with others. However, the pain is a necessary step so that there may a change in the couple's structure necessary to accept the new condition.
7. Resolution: the couple must understand that the only way to be able to face this condition is to accept their own sterility as a condition of life, to be faced with the necessary lucidity and not as impairment.

Infertility as trauma and mourning

The trauma that the individual and the couple experiences when diagnosed with infertility generates such a terrible pain that it is considered a real mourning. The project of becoming parents and creating a family is something that takes place at the psychological level, long before it happens at the physical or social level. Individuals and couples often begin to think to have a child and become parents while they are still children themself. The deeper and further lasting this psychological condition is, the stronger the attachment to the "desired" child will be (Covington, 2015). Vegetti Finzi (1997) argues that "the mother's womb may be empty, but not the mind. Before existing in the body, the child lives in the imaginary "and it is the loss in the imaginary that generates a mourning.

The classic Bowlby model is useful for the understanding of the grief faced by people and couples when they deal with the diagnosis of infertility. Bowlby (1977) found that mourning is a normal adaptive response after a loss and described the four stages of mourning after an "emotional separation":

1. shock and numbness: the loss is not perceived as real and seems impossible to accept during this phase physical stress is present and can lead to somatic symptoms;
2. greed and research: this represents the phase in which one becomes aware of the loss and realizes that the future that had been imagined can no longer be realized;
3. despair and disorganization: the person realizes that the loss has occurred and that life will never be as it was before or how it was imagined. In this phase despair and discouragement can take over;
4. reorganization and recovery: as the person develops new routines, plans and objectives the loss vanishes and will develop an adjustment to the changes in life. Action will take place.

A further exploration of the theory of mourning and loss in the context of infertility was offered by Menning (1980) who applies the 5 stages of death and dying of KüblerRoss (shock, denial, anger, settlement and acceptance) to describe the thoughts and feelings associated with infertility. Although in the case of infertility we do not speak of the loss of a loved one but of the loss of the imagined and dreamed child.

The difference between sterility and a real mourning, is that mourning for

infertility does not follow a sequential pattern, but is recurrent and it reactivates in the couple during the cycle of evolution of the family, triggered by life events like the birth of children of family, friends and acquaintances, recalling the ghost of the "empty cradle" and making reemerge the inability and impotence to conceive (Wirtberg, Möller, Hogström, Tronstad, & Lalos, 2007; McCarthy, 2008).

Infertility is an experience characterized by a series of losses

Patricia Mahlstedt (1985) based on a wide clinical observation, describes a series of losses suffered by people and infertile couples.

1. loss of self-esteem: failing to achieve the desired goal of having a child despite a concentrated effort;
2. loss of the dreamed child: this can reduce the sense of self-worth; loss of planning and control over your own life: everything that was planned will not happen;
3. loss of relationships: includes not only the intimate relationship with the partner but also the relationship with friends, family and others;
4. loss of health: the possible risks related to the exams for the identification of the diagnosis at the IVF procedure, the possible pregnancy, the side effects of the drugs, the surgical interventions, are always present, we in fact talk about complete medicalization of reproduction;
5. loss of financial security: considering the costs of the procedures and the evaluation of one's own conditions compared the entire procedure.

The use of IVF techniques with donation can also create a significant sense of loss. Patients usually consider donation IVF techniques usually after repeated therapeutic homologous procedures or because the physiological conditions make this choice necessary. Regardless of the reason that leads to this path there is a common theme for all couples that choose this option: the use of a donor. This involves a very deep and significant "loss" experience, the loss of the genetic and biological bond with the child, which becomes a source of profound suffering. For this reason and because of the many complex factors (medical, psychological, legal, ethical, social, etc.) involved in heterologous

fertilization, ASRM American Society of Reproductive Medicine, ESHRE European Society of Human Reproduction and Embriology and numerous other organizations, recommend that all participants receive psychological counseling before undergoing treatment.

What are the options for the infertile couple?

The rapid advances of medical technologies and also the changes of opinions in society about reproductive rights have made it possible to have different options to fulfill the desire to create a family (Covington, 2015). The options are as follows:

1. No specific fertility treatment: consists of optimizing the chances of getting pregnant only by adopting a healthy lifestyle in terms of sleep, diet, exercise, alcohol intake, drug use and medication use, together with the intake of vitamins and supplements for both men and women, increasing and targeting the frequency of sexual intercourse, recording the basal temperature, monitoring of ovulation through hormonal tests, evaluating the quality of the cervical mucus (Covington, 2015) .
2. Diagnosis and standard treatment for fertility optimize the chances of pregnancy by identifying and solving the existing problem(s) through:
    a. Diagnostic exams to identify the problem gynecological and andrological examination, hormonal dosages, ultrasound)
    b. Pharmacological management of minor issues (hyperandrogenism, hyperprolactinemia, thyroid issues, insulin resistance)
    c. Minor surgeries (polyps and fibroids, adhesions, endometriosis, varicocele)
    d. Targeted pharmacological therapy (clomiphene).
3. Homologous Medical Assisted Reproduction (MAP): is about optimizing the possibility of pregnancy through in vitro fertilization using the couple's own gametes. In Italy we consider first level techniques (IUI, Intra Uterine Insemination), second level (IVF, ICSI Intro Citoplasmatic Sperm Injection) and third level (microsurgical retrieval of gametes from testicle and oocytes

retrieval through laparoscopy)

4. Heterologous Medical Assisted Reproduction (MAP): consists of optimizing the possibility of pregnancy through in vitro fertilization and the involvement of one or more people outside the couple (egg donation, donation of male gametes, embryo donation, and gestational carrier).
5. Adoption: is about becoming fully a mother and father of a child who has not been born in the family.6Foster: is about taking care of child temporarily that continues to maintain ties and relationships with the family of origin.
6. Foster is about taking care of child temporarily that continues to maintain ties and relationships with the family of origin. Living without children: refers to the mature and conscious decision to accept life without children.

Daniluk (2001) has identified 4 stages in the transition to a child-free life after infertility along a continuum of themes that include: "touching the bottom", "revising the past", "aiming to the future", "renewal and regeneration".

The couples are mistakenly convinced that every option is in some way preparing for the next, which is not likely, and for this reason its necessary to continuously consider all the options available as the conditions of infertility and all the other variables that contribute to the choices change continuously and the option that at first was possible after a few months may no longer be feasible (Covington, 2015).

Evaluation of the costs and benefits of the choice

Often the couple does not know what they are going to encounter, is not fully informed on the difficulties awaiting, is not informed about how invasive the diagnostic exams they have to undergo are, they are not informed about the economic and time investment that will be required and the low success rate of these techniques (Slade, Emery, & Lieberman, 1997). Couples who undergo assisted reproduction techniques require strong emotional stability and considerable recovery capacity to cope with the very demanding procedures that are part of the treatment (Meldrum, 1997). In order to determine the best choice for that couple at that moment, they must be fully aware of the costs and benefits that each option entails.

Regarding costs, at least four different factors must be taken into consideration:

1. The financial cost is linked to the fact that any type of treatment or choice requires financial burdens.
2. The cost in terms of time is strictly related to the fact that fertility is a variable very susceptible to time, reason why people feel are sensible to time passing by.
3. The costs in terms of health risks related to diagnosis and treatment are linked to the possibility of the occurrence of a series of medical and psychological complications linked to each stage of treatment from hyperstimulation in the preparation phase to the technique, to the risks related to the surgery for the oocytes retrieval, to those related to the outcome of the treatment (a negative, a miscarriage, a pregnancy).
4. The psychological cost is the most expensive but also the most underestimated. Patients may suffer stress equivalent to another disease such as cancer or AIDS, this profoundly affects the sense of personality on relationships, marriage, sexual identity, role and responsibility in the family, and social value (Covington, 2015).

To counteract all these costs there is only one benefit: "a healthy baby". A child, however, that takes on a very different value as it may be a biological child, a child resulted from the involvement of a donor, an adopted child, foster child or no child (Covington, 2015).

Choosing IVF

The path to assisted reproduction, with its complex ritual, the high frequency of doctor visits, appointments, scans, and the large number of variables (experienced as uncontrollable) that seem to affect the outcome, exacerbates the wait and increases the stress, so that at each step the couple feels, the loss, real or symbolic, that the frustration of desiring a child involves (Graziottin, Scopesi, Stagno, & Strano, 1993). The couples who are preparing to undergo an IVF procedure have a higher probability of being stressed over time, which affects self-esteem and life satisfaction, as a result of infertility (Greil, Slauson-Blevins, & McQuillan, 2010).

The body with IVF

The greatest implication seems to be the fact that the female body is strongly objectified and the woman considered exclusively as a set of organs, some of which must be treated (Pizzini, 1994).

Link (1986) underlines how infertility cannot be treated like any other "disease", as it touches the essence of femininity and masculinity and physical and psychological intrusiveness that accompanies the treatment can cause one to question the image of oneself and give rise to emotional and psychosexual imbalances. Moreover, an obsessive attention to their own processes is often present, induced by medicalization, which generates fears and tensions that can alter physiological parameters. For example, anovulation may occur in women who have been treated with artificial insemination and difficulty in the man that produces the semen at the IVF center, with alteration of the seminal values (Dennerstein & Morse, 1988). This is compounded by the fact that in sterile women a large percentage of psychosomatic behaviors (Pasini, 1975) have been noted. The most frequent symptoms are migraine, allergy, heartburn, dysmenorrhea, muscle cramps, psychosomatic disorders linked to the genital apparatus (Pezzella, 1997).

The couple and infertility

At the couple level the "infertility crisis" can undermine the spheres of communication, sexual activity and future projects and gives rise to a condition of conflict and social isolation. Whatever the conjugal relationship before the diagnosis, the communication of diagnosis can exacerbate or activate the couple conflicts (Scatoletti, 1996). Women and men also react differently to the diagnosis of infertility and the related treatment. Most studies indicate that women tend to externalize their lives more, are subject to more stress associated with infertility, and report more symptoms of depression and anxiety than men. Men also suffer from stress from infertility but with less emotionality and more indirectly, due to the effect that this condition has on their partner and the concern for the partner (Greil et al., 2010).

Further, longitudinal studies on women's emotional adjustment to IVF treatments have shown the arising of and even increase in depression and anxiety symptoms after one or more unsuccessful treatment cycles, with a significant interaction between time and treatment outcome (Mannarini et al.

2013; Monti, Agostini, Fagandini, La Sala, & Blickstein, 2009; Verhaak et al., 2005; Verhaak et al., 2007; Kee, Jung, & Lee, 2000).

The emotional context changes when infertility is sex -specific (ominous or feminine factor), with the member of the couple diagnosed with the infertility condition presenting a more negative response, typically reflecting the negative feelings of self-esteem, self-image and body image (Petok, 2006). Men and women also differ in their strategies for managing the same issue (coping). Women show higher levels of social support research (eg. talking to friends or family members), avoidance of painful situations (pregnant friends, parties, baptisms) and searching for information. Men tend to take distances from pain and try to solve the problem. This different way of dealing with the situation can create further stress within the relationship (Jordan & Revenson, 1999). All these changes in the relationship will cause loss of complicity, aggressiveness, frequent quarrels, and often separations. These complex and different dynamics can negatively influence the intimacy and the sexual life of the couple. The sexual sphere in the married life can be compromised by this negative influence, with a decrease in the frequency and spontaneity of intercourses and can onset transitory sexual dysfunctions, such as difficulties in achieving orgasm, decrease of sexual desire, premature ejaculation, secondary impotence, inability to complete the task or temporarily azoospermia as a response to a post coital exam (Dennerstein & Morse, 1988). It also appears that intercourse is more frequent at the middle of the cycle and women tend to take charge, this too, can cause dissatisfaction and sexual problems in a man, already threatened in his manhood (Pezzella, 1997). Therefore a desexualization of the couple takes place, in which sex no longer makes sense except for conception. This mechanism generated and defined by Auhagen-Stephanos (1991) as a "strike of pleasure" indicates how sexuality "has lost its engaging character and does not present any more the vitality, the tension, the warmth, the intimate tenderness that make us feel happy and light."

This mechanism soon proves to be counterproductive as it causes unsatisfactory sexual intercourse and this does nothing but lower the possibilities for the couple to reach the desired goal, as highlighted by Costa (2001) satisfactory sexual intercourse ensures the production of better spermatozoa and large quantities, and furthermore the woman’s orgasm will facilitate the sperm to reach the uterus. The intercourse is no longer one of the means that the couple uses to communicate, it is not the product of desire anymore, but feels as a prescription, as an imposition, not always desired and

often endured (Anglesio, Di Gregorio, Farina, Macario, & Moretta,1998).

The social network and the infertile couple

Society expects that those who marry or have a stable and lasting relationship, have children and that this will keep the couple united and bonded. Children represent a new value, no longer economic, but they represent emotional gratification for the parents.

As Griel (1991) noted, children have become precious as an emotional investment, providing emotional warmth and affection, especially to their mothers. When becoming parents is not possible, when this investment is not allowed, the social impact leaves a heavy mark. Often the couple tackles this problem alone, because when this is not discussed at a social level they usually encounter tremendous pressure especially from family and from the rest of society when the topic of having children is discussed.

Moreover, as little is said and little is known about this topic, possibly family and friends, colleagues and all those who stand outside the couple, could not really understand. In addition there is the fear of hurting (e.g. the possible pain caused by not being able to make grandparents of their own parents) (Covington, 2015).

Another source of major concern can be loosing a job. The fear that many absences can compromise work or the possibility of a career advancement, which in turn can affect the economic aspect that is fundamental to go through IVF. Deciding not to communicate the problem and the treatment may have negative effects on work as the treatment requires several appointments and therefore must be organized to match without impacting work responsibilities, otherwise the person is requires to make excuses (Canington, 2015). Regardless of whether or not the couples choose to communicate the problem, they will always tend to adopt behaviors to try to limit social discomfort. Like the isolation from the outside world to avoid the severe suffering of seeing others easily obtain what they desire.

For many couples it causes not only biological sterility but becomes "social sterility" refusing others company (Auhagen-Stephanos, 1991). The withdrawal from the social scene does not depend only on the will of the sterile couple, but as Cecotti points out (2004), a two-way mechanism can trigger: the couple tends to escape, but at the same time friends tend to avoid them too, to ease their pain. The sense of guilt and the inability to find ways to help may cause

the the couple's circle of friends to avoid opportunities that would generate reciprocal suffering. This also may cause a loss of relationships with family, giving up relationships with sisters or friends who are pregnant or who have just given birth. Avoiding social encounters during which one discusses pregnancy and the education of children, family gatherings over the holidays.

The holidays are notoriously difficult for couples because they are all focused on families and children. Moving away from others and losing relationships can reduce support and ease feelings of isolation and depression (Mahlstedt, 1985). Patient support groups also provide assistance and information even though the internet has radically changed the way in which patients access information, seek support (social media blog) and receive education (Aarts et al., 2012).

How to preserve the wellbeing of the couple favoring the strategies to face the treatment

To better cope with and manage the diagnosis and following treatment for infertility, it is necessary for the couple to promote a series of strategies that can help to overcome the long, complex, painful and unpredictable path that they will have to go through in the best possible way.

In this regard, it has been found that it is of fundamental importance:

- to promote resilience
- to learn stress management techniques
- cognitive appreciation (acceptance of the situation)
- to learn active coping strategies
- rebuild self-esteem
- reclaim the relationship with your body
- recover a good intimate and sexual understanding
- encouraging social relationships
- identifying spiritual resources
- finding a positive meaning to the experience of infertility (Covington, 2015).

Particular emphasis is given to the issue of resilience. For resilience we mean the ability of an individual to adapt to adversity and to handle difficulty of life with flexibility, therefore, reflects the way in which a person deals with stress and emotional perseverance. It is conceived as a process and not a character trait and, therefore, is not a characteristic of the personality with

which one is born, but rather is a learned behavior of adaptation to a stressful event or a significant trauma (Covington, 2015; Bonanno, Westphal, & Mancini, 2001).

Little research has been done to evaluate resilience in relation to stress caused from infertility, but it has been observed that the resilience of women undergoing infertility treatments is lower compared to the general population (Sexton, Byrd, & von Kluge, 2010) and that men tend to have less stress, which indicates greater resilience, and that higher resilience correlates with a better quality of life for infertile couples (Herrmann et al., 2011).

Research has shown that the most appropriate psychosocial intervention is group counseling (Boivin, 2003). This normalizes the emotional response to infertility teaches effective coping strategies and educates patients on various aspects related to the treatment and construction of a family (Covington, 2006). Currently, most IVF centers typically offer couple counseling services. Group counseling, although useful because it provides a better perspective on the cultural pressures being faced and the consequences of the individual experiences, are not common due to organizational difficulties. (Cecotti, 2004) (Salerno & Giuliano, 2011).

Even though individual and couple counseling should be easily accessible to patients, the reality is that only a small minority of patients will accept counseling and couples that are asked to pursue counseling during a "crisis" often consider it to be another example of their inadequacy (Boivin, 2003). Following the failure of treatment, couples experience feelings of anger, depression, emptiness, sadness, guilt. In some cases the experience of repeated failures gives rise to the process of mourning, and acceptance of reality, believing that everything possible has been done, in other cases despair and the sense of having been betrayed by their own body prevails. For this reason the importance of a constant psychological support is emphasized (Dennerstein & Morse, 1988).

The importance of psychological support

The importance of Psychological support is now so widely recognized that the special interest group in Psychology and Counseling (ESHRE, European Society of Human Reproduction and Embryology) has organized a meeting of delegates from seven countries to discuss counseling issues in the field of infertility. This led to the Guidelines for Counseling in Infertility (Boivin et al.,

2001). The guidelines recommend the availability of psychosocial services to patients throughout the treatment phases. The psychologist work focuses on the acceptance of the diagnosis, coping with social pressure, helps with the mourning and sense of loss, and the evaluation of possible options to achieve the desired child, the recovery of one's own body image, and with the sometimes ong and tortuous therapeutic process involved in IVF, the issues that arise from heterologous (donation) IVF and the outcome of the treatment. Fertility counseling offers patients an opportunity to explore their thoughts, feelings, beliefs and relationships in order to achieve a better understanding of the meaning and the implications caused by the choice and type of treatment they choose to undergo. Counseling can offer support to those undergoing treatment and can help them to deal with their feelings about the outcomes of the treatment itself (British Infertility Counseling Association, 2007). It is particularly indicated in cases where the couple should turn to heterologous (donation) IVF techniques. In these cases, in fact, the need for accurate information and reassuring support emerges, especially with this procedure, doubts, fears and fantasies multiply due to the to the presence of a third party, the donor. An anonymous donor, a stranger, experienced as a mysterious figure, sometimes benevolent and sometimes persecutory (Micioni, 1993). In these cases, in fact, it is fundamental to have a psychological counselor that offers the opportunity to calmly analyze the fantasies and expectations of the couple and identify the most vulnerable individual early in the process in order to help them face their conflicts and make the right decision (Connolly, Edelmann, Cooke, & Robson, 1992). To help the couple to face the path with greater awareness, to control their fantasies and expectations, to elaborate the possible failure, to prevent the depressive states that often come along with repeated failures, to realistically confront the impossibility of having biological children, and in this case psychological support can facilitate the mourning process and eventually promote acceptance of one's infertility (Dennerstein & Morse, 1988; Hynes, Callan, Terry, & Gallois, 1992), and avoid that the already broken relationship may deteriorate completely.

The best practice for the management of infertility

It is not possible to separate the medically assisted reproduction techniques from the psychosocial problems that patients with infertility face. (Covington, 2015). We must then talk about integrated care. The American Society for

Reproductive Medicine (ASRM, American Society of Reproductive Medicines) and the European Society of Human and Embryology (ESHRE, European Society of Human Reproduction and Embryology), recognize a model of multidisciplinary approach to infertility (Covington, 1995; Norre & Wishmann, 2011). The integrative medical and psychosocial care proposed by Covington (2015) with its "collaborative model of reproductive health care" (Covington, 2006) and also by other Authors as "patient-centered care" (Van Empel et al., 2010) or "integrated approach" (Boivin et al., 2012) presents a bio-psychosocial approach in which the diagnosis and treatment of reproductive disorders are considered to include a variety of aspects that will affect the individual and infertile couple experience: physiological, psychological, interpersonal, familial, spiritual, cultural and social. General health, the physical state, the emotional well-being and the patient's quality of life are factors influencing the way in which the patient is able to cope with this condition. This approach also emphasizes the importance of collaboration between healthcare professionals and patients during the diagnosis, the treatment in order to obtain optimal results.

Conclusions

Considering all the variables and of all the aspects discussed, there is a great fundamental importance and necessity to provide psychological support to individuals and couples with infertility problems. This support becomes indispensable, starting from the first difficulty that couples face, when they start having sexual intercourse without using contraception and through a reasonable period of time of trying to conceive with no positive result. Support is necessary starting from the difficulties that a couple faces when diagnosed with infertility, going through the evaluation of the options available to achieve the desired child and become parents, to the possibility to make an informed, adequate and shared choice, before going through the difficult and complicated path that is IVF. It is necessary to evaluate all the specifics of the situation to offer an effective psychological intervention capable of managing emotional conditions and offer solutions that can optimize clinical protocols. This type of psychological and social intervention must be carried out by psychologists / psychotherapists adequately prepared, trained and constantly updated in this specific field of Reproductive Psychology, and it has to be part of a collaboration between the various professional figures working in the field of

human reproduction.

Note

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