

Overview of the Epidemiology of Infertility in Islamic Perspective

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Abstract

Infertility is a phenomenon that not only gives tough time to females but it equally affects male partners. Due to the quiet nature of males and communication gap with female partners they tend to hide their feelings of being incomplete and being not sharing these things could develop thoughts of suicide and can drag them to endless emotions of depression. While discussing the sexual and reproductive health noting all the facts and figures regarding maternal mortality and factors leading towards couple's fertility it becomes necessary to discuss infertility in detail and conceptualizing this phenomenon from perspective of religion. From clinical point of view, number of couples seeking help in conceiving fall under the criteria of infertility. Although there many reasons behind infertility as sexual history, age etc. but in this paper male infertility is the focus that sub fertile men have missing Y-chromosome, which effects the number of sperms



and passes the infertility to the off springs. ICSI born child are affected by abnormal structure of chromosome and increased sex chromosome disorders.

Key words: Infertility, Determinants of infertility, Reproduction, Infertility in the Light of Quran and Hadith

Overview of the Epidemiology of Infertility in Islamic Perspective

Introduction

Allah Almighty has blessed man with all the leisure's of life in the form of his blessings one of which bestowment is having offspring. Progeny is the natural desire of human being. Being infertile develops the sense of incompleteness and could confine men social interactions. It not only disturbs the human mind but also damage a couple's relationship. Social, economic, medical and demographic affects are also related to this major public health problem named as human infertility. This is in Allah's hands to bless a couple with His this divine blessing or may deprive them off from this. Having child is that beautiful dream for which man is ready to do every struggle to make it happen true. While discussing the sexual and reproductive health in the previous chapter and noting all the facts and figures regarding maternal mortality and factors leading towards couple's fertility it becomes necessary to discuss infertility in detail and conceptualizing this phenomenon from perspective of religion. Moreover it is essential to have a look on basic experiences of infertility. In this chapter we will do scrutiny research on definitions of infertility and its determinants. This chapter will also highlight infertility experiences of male partners in general to highlight that infertility is not solely related to women partners. The chapter will also end up focusing on infertility from perspective of basic sharī'ah resources.

Defining infertility

Deposition shows that average of 84% of woman get pregnant within one year after having unprotected sex which rises to 90 – 93% within two to

three years.¹ This is the natural human fertility but alteration from this natural path falls into the category of infertility. Infertility can be interchanged with the terms “sterility, subfertility and sub fecundity.”

An introduction to definition

Anthropology or study of population density shows the characteristics of human populations and discuss the enough history about the various fertility behaviors and patterns. Anthropologists are usually interested in birth distribution across the population and use “sterility” as term to define population that has not conceived after marriage.² The total rate of fertility is associated with the number of live births experienced by women through their lifetime. Various terms are developed by demographers for the detailed description of various fertility phenomenon. The term “fecundity” is described as capability of individual to achieve life birth. This term is not much used out of the demography but the terms having roots in main stream of anthropology are “infertility and sterility”. To discuss infertility one must know about voluntary and involuntary infertility. The inability to have a child becomes a problem when the desired outcome is wanting. Discrimination between both is quite difficult because a woman experience both kinds of infertilities during her life span. From clinical point of view, number of couples seeking help in conceiving fall under the criteria of infertility. Clinical definitions are characterized by “length of span containing unsuccessful conceiving attempts and give a verge above which it becomes necessary to seek a medical treatment. Perpetually conception is interest of outcome rather than birth. Classical definition is inability to conceive within period of 12 months.³ Whereas WHO promoted this span to 24 months.⁴

It is requirement of all definitions that during this non-conception phase, regular sexual intercourse is taking place without safety diaphragm.

Epidemiologists are concerned with scope, pervasiveness and probe of determinants and risk factors. Exact definition of infertility is needed that

removes the false ones. “Unresolved infertility” is a term that meets this criterion. *“It is inability to give a live birth and is measured at the last of women’s menopausal years.”* TTP (time to pregnancy) is another measure of infertility used in epidemiologists and is defined *as number of months that a couple take to conceive after having unprotected sex.*⁵ This term was first used by demographers in 1920’s and its use increased during late 1980’s. When commonly used evaluate life styles, occupational vulnerability or threats to fertility.⁶ To conduct studies of this kind are eventually impractical therefore, it can be analyzed through reminiscence autonomy. TTP can be used as an inductor estimating interval between marriage and first birth. It can be used as continuous measure but common approach is to have a close off date to get binate results. 12 months is usually cutoff date but couples may take up to 24 months. Couples taking 12 – 24 months falls under category of “impaired fertility” and couples taking less than this time falls in category of normal fertility.

Subtypes of infertility

Infertility can be categorized on the basis of problems in males and females partners both or neither. 30% of infertility is attributable because of male and 54% because of female and 25% cases remain unexplained whereas 15% of couples can have more than one cause for their infertility.⁷

There are 3 most common causes of sub-fertility :Sperm dysfunction, Ovulation disorders,Tubal factor problems.

Sperm dysfunction

It reduces motility or normality of sperm counts for 30% of infertility causes. Semen analyses is most common in such cases.⁸

Ovulation disorder

Ovulatory disorders contribute to 25 – 30% of infertile couples. ⁹It can be diagnosed with the help of blood tests. According to WHO, ovulatory disorders are of 3 types.

1) Hypothalamic Pituitary failure

It contributes to 10% of infertility. Excessive exercise can help its diagnosis.

2) Hypothalamic Pituitary dysfunction

It affects 85% of women. PCO's fall into this category that account for 70% of ovulatory disorder.

3) Ovarian failure:

It counts around 5% of women.¹⁰

Tubal factor problems

Tubal factor problems are directly associated with infertility. Now 11 – 30% of infertility is associated with tube factors which is damaged by chlamydia or gonorrhea, pregnancy sepsis or by post-surgery complications.¹¹ 5% of infertility in women is caused by endometriosis. Uterine abnormalities are 10 – 15% involved in infertility i.e. fibroids affect up to 30% of women, sperm cervical mucus affects 9 – 15% of infertile couples.¹²

Determinants of infertility

There are various factors that affect male and female infertility. These factors include age, weight, smoking, sexual history and alcohol etc.¹³

Sexual History

Possible cause of couples infertility is genital tract infections as in women fallopian tubes are exposed to damage and it leads to tubal infertility. STD's also contribute towards the damage of these tubes. Engaging in sexual intercourse with more than one partner can increase the infertility chances in later life.¹⁴

Age

Age can be seen as a factor affecting both male and female fertility. Increasing age of woman leads towards the decline in number of eggs. In mid-30's, follicle loss becomes speedy leading towards miscarriage making conception more difficult. ART's and different fertility treatments that guarantee

conception are creating myth as increased age can cause miscarriage, ectopic pregnancy, multiple births and chromosomal abnormalities.¹⁵ Similarly male sexual dysfunction is associated with the age which starts in mid40's. At this point sperm lose their morphology and motility.¹⁶

Weight

Being under weight or over weight can affect normal ovulation. BMI is associated with conception. Inconsistent BMI leads toward menstrual abnormalities and metabolic disturbance.¹⁷ In males obesity can directly affect sperms or can cause hormonal changes that lead towards infertility.¹⁸

Alcohol

Consumption of alcohol and association between infertility is inconsistent. Alcohol intake lower the level of testosterone which causes problems like erectile dysfunction and low sperm production. Liver disease as result of alcohol also contribute towards infertility.¹⁹ Alcohol consumption in women disturbs the menstrual cycle and cause endometriosis.

Smoking

Cigarette smoke has negative impact on each system involved in female reproductive process as it can result in premature egg depletion and age's women ovary.²⁰ Smoking in man decreases the density of sperm and reduce the success rate of ART's.²¹

Drug Use

Steroids that men take for muscle strengthening cause testicles to shrink and decrease sperm production.²² Use of cocaine and marijuana decreases sperm density and motility.

Stress and depression

Psychological stress and hormones needed to regulate sperm parameters. Prolonged emotional stress may affect sperm count. Similarly depression causes inhibited ejaculation and erectile dysfunction.²³ Increase stress in

woman cause hormonal imbalance, delayed menstrual cycle and healthy oocytes production.²⁴

Environmental causes

Female fertility is very less affected by outer factors as compared to male fertility. These factors include lead exposure, radiations, organic solvents, pesticides and heat exposure. Normal testicular function is performed between 2 – 4°C as more than this temperature affects semen quality. It is created by hot baths, tight clothes and laptop etc.²⁵

Infertility and Reproduction

Infertility leads to adverse reproductive outcomes such as fetal death, preterm birth or low birth weight and chromosomal defects. Adverse reproductive outcomes are necessary to define in order to discuss their relationship with infertility.

TOP (Termination of Pregnancy)

It is the act of ending a pregnancy intentionally because of medicine or surgery. It is also termed as induced abortion or therapeutic one. TOP is done in case of unplanned or unwanted conception.²⁶

Miscarriage

It is termed as fetus death at a defined point in early pregnancy. 8/10 miscarriages happen in first 3 months of pregnancy. That's why it is termed as spontaneous abortion.²⁷

Still birth

Death of infant after surviving for 28 weeks in the womb. It refers to chromosomal disorder, blood pressure maternal diabetes and post –date pregnancy (a pregnancy that lasts for more than 42 weeks).

Ectopic pregnancy

Here implantation occurs inside the uterus or in fallopian tubes. This pregnancy lead towards the removal of one of the fallopian tubes. It is more

common in patients with STD's. Or in people older than 35 years or in couples undergoing fertility drugs.²⁸

Male Infertility

Male outlook of infertility has been published by different research regimens. Keylor and Apfel stated that even male infertility affect half of the infertile couples but such factor is neglected in the research. Research on male infertility is mostly issued by psychology and infertile man's outlook of pain and distress are findings of research. There are three factors that could help in detecting male infertility.

- i. Low sperm production (Oligozoospermia)
- ii. Poor sperm motility (asthenozoospermia)
- iii. Abnormal sperm morphology (atzoospermia)

Common cause of infertility in males is combination of all three. (COAT)

Main causes of infertility could be varicocele, varicose veins around testicles, too few sperms, some sort of injury to reproductive system, psychological factors or some other diseases.²⁹

The study about male infertility disclosed four concepts;

- 1) Individual stress
- 2) Challenges in communication
- 3) Problems associated with therapy process
- 4) Effect of norms and religious behavior

The strong trust in reproduction for family strengthening as well as societal and cultural norms effects men infertility experiences within themselves and their spouses too.

Male infertility experience

Mostly infertility is accused for women that's why men's emotional reactions are not explored. When it comes to infertility, men's ability to become father, and reproduction of family tree are major factors behind emotional reactions. 15 -20% of men state infertility as one of the most difficult issue of life.

Infertile men's minds are filled with thoughts of depression and suicide as compared to the men who do not have infertility issues. More than 15% needs professional help to deal with their emotional issues. Men's infertility is mostly considered shameful and women protect men by taking blame to themselves. Men feel mere pain and stress when they used to talk about their infertility. For being a real man, bearing child has become an ability and criteria that's why men with infertility issues consider themselves as they have failed to play their role as man and their identity has been undermined. Men and women experience infertility in a distinct way but when it comes to emotional reactions, they are not that much different. The difference is in the expression of that emotions. Women speak up about their sadness while men gets bury themselves in work and use it as a tool to forget painful issues of their lives. As men's style is avoidness and withdrawal hence they feel more distressed than women. Their anxiety rises after failed ART's. They get stronger feelings of injustice as they think of themselves more responsible for couple's infertility. Almost all the study on male infertility shows that men feel more worried about the way their partner react towards infertility. They also feel worried about this that how this pain and sorrow affect their marital relationship.³⁰

Infertility in the Light of Quran and Hadith

The concept of infertility can be understood by the appealing story of Hazrat Ibrahim (AS) and Hazrat Sarah that has been mentioned in the Holy Quran. He and his wife Sarah remained infertile for several years and then Allah Almighty blessed them with progeny.

Here comes in Quran:

أَوْجَسَ مِنْهُمْ خِيفَةً قَالُوا لَا تَخَفْ وَبَشَّرُوهُ بِغُلَامٍ عَلِيمٍ فَأَقْبَلَتْ امْرَأَتُهُ فِي صَرَّةٍ فَصَكَّتْ وَجْهَهَا وَقَالَتْ عَجُوزٌ عَقِيمٌ قَالُوا كَذَلِكَ قَالَ رَبُّكَ إِنَّهُ هُوَ الْحَكِيمُ الْعَلِيمُ³¹

*Gave him good news of a learned boy and his wife
approached with a cry and struck her face and said I am a*

*barren old women. Angles said; this has said your Lord and
Indeed He is the wise and All Knowing.*

And thus Prophet Ibrahim was blessed with the son prophet Ishaq (AS).
Quran has mentioned the story of Zakariya (AS) who remained faithful and
supportive to his infertile wife. Quran mentions as:

وَزَكَرِيَّا إِذْ نَادَى رَبَّهُ رَبِّ لَا تَذَرْنِي فَرْدًا وَأَنْتَ خَيْرُ الْوَارِثِينَ فَاسْتَجَبْنَا لَهُ وَوَهَبْنَا لَهُ يَحْيَىٰ
وَأَصْلَحْنَا لَهُ زَوْجَهُ إِنَّهُمْ كَانُوا يُسْرِعُونَ فِي الْخَيْرَاتِ وَيَدْعُونَنَا رَغَبًا وَرَهَبًا وَكَانُوا لَنَا
خُشِعِينَ³²

*And mention Zakariya when he asked his Lord; My Lord!
Don't leave me alone [without offspring] though you are the
best of inheritors so, we responded to him and him Yahya
(AS). We amended his wife from barrenness Indeed they
called us in hope and fear and they were humbly submissive
to us.*

On handling infertility issue there are two very important sayings of Prophet (SAAW).

أَخْبَرَنَا عَبْدُ الرَّحْمَنِ بْنُ خَالِدٍ قَالَ حَدَّثَنَا يَزِيدُ بْنُ هَارُونَ قَالَ أَنْبَأَنَا الْمُسْتَلِمُ بْنُ سَعِيدٍ عَنْ
مَنْصُورِ بْنِ زَادَانَ عَنْ مُعَاوِيَةَ بْنِ قُرَّةَ عَنْ مَعْقِلِ بْنِ يَسَارٍ قَالَ جَاءَ رَجُلٌ إِلَى رَسُولِ اللَّهِ صَلَّى
اللَّهُ عَلَيْهِ وَسَلَّمَ فَقَالَ إِنِّي أَصَبْتُ امْرَأَةً ذَاتَ حَسَبٍ وَمَنْصَبٍ إِلَّا أَنَّهَا لَا تَلِدُ أَفَأَتَزَوَّجُهَا فَتَهْأَهُ ثُمَّ
أَتَاهُ الثَّانِيَةَ فَتَهْأَهُ ثُمَّ أَتَاهُ الثَّالِثَةَ فَتَهْأَهُ فَقَالَ تَزَوَّجُوا الْوُلُودَ الْوُدُودَ فَإِنِّي مُكَاتِّرٌ بِكُمْ³³

*Marry the one who is fertile and loving for I will boast of
your great numbers. Prophet (SAAW) taught a pivotal
principle regarding medicine and reproductive medicine.*

حَدَّثَنَا مُحَمَّدُ بْنُ الْمُثَنَّى، حَدَّثَنَا أَبُو أَحْمَدَ الزُّبَيْرِيُّ، حَدَّثَنَا عُمَرُ بْنُ سَعِيدٍ بْنُ أَبِي حُسَيْنٍ، قَالَ
حَدَّثَنِي عَطَاءُ بْنُ أَبِي رَبَاحٍ، عَنْ أَبِي هُرَيْرَةَ - رَضِيَ اللَّهُ عَنْهُ - عَنِ النَّبِيِّ صَلَّى اللَّهُ عَلَيْهِ وَسَلَّمَ
قَالَ " مَا أَنْزَلَ اللَّهُ دَاءً إِلَّا أَنْزَلَ لَهُ شِفَاءً " ³⁴

There is no disease Allah has created without its treatment.

Conclusion

Infertility is a phenomenon that not only gives tough time to females but it
equally affects male partners. Due to the quiet nature of males and

communication gap with female partners they tend to hide their feelings of being incomplete and being not sharing these things could develop thoughts of suicide and can drag them to endless emotions of depression. The religious studies give lessen not to leave hope in such situations and have complete faith that there is always a cure present for ailment could show positive results. So by taking care of health and advice of endocrinologists one may get the desired outcomes. Assisted reproductive techniques could prove a ray of light to such couples.

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