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The Prevalence of Breast Cancer among Selected Group of Sudanese Women with Infertility Disorders

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Justification: There is no published data about the prevalence of breast cancer among infertile Sudanese women.

Objectives: To know the prevalence of breast cancer among selected group of infertile Sudanese women attended to Banoon IVF center, Khartoum, Sudan, 2016.

Method: Descriptive, cross sectional study, 100 infertile Sudanese women were involved in the study, from January to December 2016.

Result: The prevalence of breast cancer among the study group was: 6%.

Discussion: Some treatments for breast cancer can cause temporary infertility and other treatments cause permanent and irreversible menopause, which means you are permanently infertile.

Keywords: breast cancer, infertility, Sudanese women.

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Discussion: Some treatments for breast cancer can cause temporary infertility and other treatments cause permanent and irreversible menopause, which means you are permanently infertile. Breast cancer patients treated with chemotherapy run the risk of developing premature ovarian failure or very early menopause then the prevalence of infertility among the study group was high.

Conclusion: Further studies must be done involving women from many nationalities and with large sample size.

Acknowledgment: Special thanks to the participants and to the staff of Banoon IVF center for their cooperation and commitment.

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I. INTRODUCTION

Infertility is “a disease of the reproductive system defined by the failure to achieve a clinical pregnancy after 12 months or more of regular unprotected sexual intercourse.”⁽¹⁾

Infertility results from female factors about one-third of the time and male factors about one-third of the time. The cause is either unknown or a combination of male and female factors in the remaining cases. Female infertility causes can be difficult to diagnose. There are many available treatments, which will depend on the cause of infertility. Many infertile couples will go on to conceive a child without treatment. After trying to get pregnant for two years, about 95 percent of couples successfully conceive.⁽²⁾

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Major Causes of Infertility

a) Ageing

A woman's age is the most significant factor influencing her fertility. Women are born with a fixed number of eggs and so as they age so do their eggs. A woman's fertility starts to decline in her early 30s and by age 35 it has dropped by approximately 40%. By age 40 a woman's fertility has declined even further. In addition, as women age conditions like endometriosis can also progress to a level where they may impact on fertility as well (see endometriosis below). Unfortunately, there appears to be a lack of recognition of the impact that age has on fertility. Celebrities having babies in their 40s, for example, has given many women the impression they can leave their childbearing to later in life. Similarly, many women falsely believe that infertility treatments like IVF can overcome any fertility issues. The latest figures on assisted reproductive technology in Australia and New Zealand show that for women aged 30-34 years the chance of a live birth per treatment cycle was 25.3%. For women aged 35-39, this percentage dropped to 16.9% and for women 40-44 years it was only 6.6%.

b) Polycystic Ovarian Syndrome (PCOS)

PCOS is a hormone imbalance which results in disrupted menstrual and ovulation cycles. It is the most common cause of infertility due to an ovulation (no ovulation or egg is released). The name of the condition comes from the presence of tiny cysts on the outside of the ovaries. While many women have polycystic ovaries, not all women have polycystic ovarian syndrome. Women with PCOS have additional symptoms including irregular periods, excess weight (particularly in the tummy area), and excess hair on the face and body, acne and male pattern baldness. It is estimated that 30% of infertile women suffer from PCOS.

c) Endometriosis

Endometriosis is a condition in which the tissue that lines the uterus (endometrial tissue) grows in other parts of the body, usually in the pelvis. This stray endometrial tissue bleeds in the same way as the lining of the uterus, except the blood/tissue is trapped causing irritation and inflammation. Scar tissue can form resulting in adhesions which can stick pelvic structures together. The most common symptoms of

endometriosis are period pain and/or pelvic and abdominal pain. Endometriosis can affect fertility by damaging the ovaries so that ovulation cannot occur. Similarly, damage and/or blockages to the inside of the fallopian tubes can impede the journey of the egg to uterus. It is also thought that endometriosis can have an impact on the lining of the uterus, affecting the implantation of a fertilized egg. If women experience pain during sex from endometriosis they might also be reluctant to have sex, reducing their chances of getting pregnant.

d) *Weight*

A woman's weight is an important consideration in her fertility. Women who are underweight and/or have a low percentage of body fat (i.e., athletes) can experience irregular menstrual cycles and issues with ovulation. Being overweight or obese can also interfere with normal menstruation and ovulation. In addition, overweight and obese women also have a higher risk of miscarriage and other pregnancy complications and a lower success rate with infertility treatments such as IVF. Women who find it difficult to lose weight should be assessed to see if they have PCOS (see above) as this is a common symptom. Women can often improve their chances of pregnancy by relatively small changes to their weight. For example, in women who are overweight or obese, a 5% weight loss can be enough to restore a regular menstrual cycle and ovulation.

e) *Sexually Transmitted Infections*

If a STI such as chlamydia or gonorrhea goes untreated it can lead to pelvic inflammatory disease (PID). PID is the infection or inflammation of the organs and tissues in the pelvis. Unfortunately, women infected with a STI, particularly chlamydia, don't always experience any symptoms or the symptoms are vague so they do not seek treatment. If PID is left untreated it can cause scarring in the fallopian tubes which can narrow them, blocking the path of the egg. If a fertilized egg becomes trapped in a blocked fallopian tube an ectopic pregnancy can occur (where the fetus develops outside the uterus). This is a serious, potentially life-threatening health condition that requires immediate medical attention. Studies suggest that one episode of PID decreases a woman's chance of a successful pregnancy by 10%. After two or more episodes of PID a woman's risk of becoming infertile is about 50%.⁽³⁾

Cancer and its treatment can sometimes affect a woman's ability to have children.⁽⁴⁾ Cancer treatments that can affect in fertility include chemotherapy, radiotherapy, and surgery on your reproductive organs, including the ovaries. It can be difficult to know what the effects of the cancer treatment will be until much later. Many people who are treated for cancer, especially those treated for cancer as children, remain fertile and go on to have a family of their own in later life. Some find that their fertility is affected for a short time and then

recovers when treatment has finished, but others find their fertility is affected for longer. It often depends on your individual circumstances, such as your age, the treatment you receive.⁽⁵⁾

Some treatments for breast cancer can cause temporary infertility or make it harder for you to get pregnant after treatment ends. Other treatments cause permanent and irreversible menopause, which means you are permanently infertile.⁽⁶⁾ Breast cancer patients treated with chemotherapy run the risk of developing premature ovarian failure or very early menopause.⁽⁷⁾

Both infertility and breast cancer regarded as global health problems and many women in the Sudan were affected by one or both of them.

Study done by Intisar E Saeed et al, Khartoum, 2009, showed that The ASRs of breast cancer in women living in Khartoum State, using the 1966 and 2000 WSP, were 60.8 and 66.8 per 100,000, respectively, which were higher than what reported in black women in Harare, Zimbabwe (46.8 per 100,000, 2006–2010), and in Kampala, Uganda (31.0 per 100,000, 1991–2006) in East Africa. The incidence rate of breast cancer in women in Khartoum was also higher compared to North Africa, such as in Benghazi, Libya with an ASR of 22.9 per 100,000 in 2003, 24.1 per 100,000 in Tunis, Tunisia (1993–1997), and 49.6 per 100,000 in Garbiah, Egypt (1999–2000).

II. LITERATURE REVIEW

There is no previous data about the prevalence of breast cancer among infertile women in or out of the Sudan.

III. JUSTIFICATION

There is no published data about the prevalence of breast cancer among infertile Sudanese women.

IV. OBJECTIVES

To know the prevalence of breast cancer among selected group of infertile Sudanese women attended to Banoon IVF center, Khartoum, Sudan, 2016.

V. MATERIALS AND METHODS

Study Design: Descriptive, Cross Sectional Study.

Study Period: January-December, 2016.

Study Population: Known Infertile Women.

VI. SELECTION CRITERIA

a) *Inclusion Criteria*

- Infertile
- Sudanese
- Woman

b) *Exclusion Criteria*

- Fertile
- Nationality other than Sudanese
- Man

c) *Sample Size:* 100d) *Data Collection:* By Questionnaire.

VII. ETHICAL CONSIDERATION

All participants were informed about the goals of the study and they were consent to be involved in the study.

VIII. RESULT

The prevalence of breast cancer among the study group was: 6%.

IX. DISCUSSION

Some treatments for breast cancer can cause temporary infertility and other treatments cause permanent and irreversible menopause, which means you are permanently infertile. Breast cancer patients treated with chemotherapy run the risk of developing premature ovarian failure or very early menopause then the prevalence of infertility among the study group was high.

X. CONCLUSION

Further studies must be done involving women from many nationalities and with large sample size.

ACKNOWLEDGEMENT

Special thanks to the participants and to the staff of Banoon IVF center for their cooperation and commitment.

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