

Secondary Infertility among Male in Selected Hospital of Bangladesh

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Abstract:

Secondary infertility is failure to conceive following a previous pregnancy. This cross-sectional study was conducted among 101 respondents who had visited for treatment in hospital and 15 medical doctors through KII process at the Bangabandhu Sheikh Mujib Medical University (BSMMU), Mohammadpur Fertility Services and Training Center and Dhaka Medical College Hospital from March 2013 to June 2013. Among the respondents, majority (53.5%) was in 29-39 years age group and most of them (54.5%) completed college

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education. Out of total respondents, 66.3% were smokers, and 33.7% were non smoker. Among the total respondents 22.8 % respondents took alcohol. Out of total respondents 15.8% had sexual transmitted disease. Among all 19.8% respondents BMI were (15-20), 62.4% were (21-26), and 17.8% were (27-32). The most important findings from Key Informant Interviews (KII), 80% respondents were supported the cause of risk factors of male infertility is azospermia and 20% respondents explain different reasons such as food habit, smoking, alcohol, traumatic injury, loss of libido etc. It is strongly recommended to implement a clinic based health campaign to screen cases along with a treatment and prevention program.

Key words: Secondary infertility, Key Informant Interviews (KII)

Introduction

Infertility is a condition that causes psychological distress to the couples. Both women and men may have problems that result in infertility. Almost one-third of infertility problems are due to women, another one-third of cases are caused by men and the other one-third of cases are caused by a combination of both women and men problems or by unknown reasons.¹

A man is responsible in about 20% of infertility among couples, and contribute to infertility with woman in another 30-40%.² Infertility can either be primary or secondary; primary male infertility is when the man has never impregnated a woman, while secondary male infertility is when a man has impregnated a woman irrespective of the outcome of the pregnancy. The past medical history of patients is very important because it contribute to the diagnosis in one quarter of cases of infertility. Men with secondary infertility, in general, have better chance of future fertility.³

Sexually transmitted diseases and male accessory gland infection (MAGI) can impair male fertility by increasing the reactive oxygen species, or by causing inflammatory lesions of

the epididymis, or urithritis, or urethral strictures, or ejaculatory disturbance, or by stimulating anti sperm antibodies (ASA). Infertile men may have a high incidence of herpes simplex and human papilloma virus in their semen, the presence of human papilloma virus in their semen may have an effect on sperm motility.³ Unexplained infertility can describe 10 to 15% of infertile couples.⁴The aim of the study was to assess the risk factors of male infertility.

Methodology

The cross-sectional study was conducted at the Bangabandhu Sheikh Mujib Medical University (BSMMU), Mohammadpur Fertility Services and Training Center and Dhaka Medical College Hospital from March 2013 to June 2013. This study was carried out with an aim to find out the level of risk factor of male fertility. The study was conducted among urban men and the sample size was 101 male. Purposive sampling technique was used to select the sample. The data were collected through semi structured questionnaire and the data were analyzed using Statistical Package for Social Science (SPSS) Version 17. The KII was also conducted among 15 medical doctors.

Result:

The cross-sectional study was conducted to assess the risk factors of male infertility.

Table 1: Distribution of the socio-demographic characteristics of respondents

socio-demographic characteristics	Frequency (N)	Percentage (%)
Age (years)		
18-28	25	24.8
29-39	54	53.5
40-50	22	21.8
Educational qualification		
Non Formal	3	3.0

Primary	14	13.9
Secondary	20	19.8
College	55	54.5
University	9	8.9

Among the respondents, majority (53.5%) was in 29-39 years age group and most of them (54.5%) completed college education.

Table: 2 Distribution of smoking tobacco user

Smoking	Frequency (N)	Percentage (%)
Yes	67	66.3
No	34	33.7

Out of total respondents, 66.3% were smokers.

Table: 3 Distribution of energy drink user

Energy drink	Frequency (N)	Percentage (%)
Yes	78	77.2
No	23	22.8

Among all 77.2 % respondents took energy drink.

Table: 4 Distribution of alcohol consumption

Take alcohol	Frequency (N)	Percentage (%)
Yes	23	22.8
No	78	77.2

Among the total respondents 22.8 % respondents took alcohol.

Table 5 Distribution of History of sexual transmitted disease (STD)

History of STD	Frequency (N)	Percentage (%)
Yes	16	15.8
No	85	84.2

Out of total respondents 15.8% had sexual transmitted disease.

Table: 6 Distribution of Body Mass Index (BMI)

BMI	Frequency (N)	Percentage (%)
15-20	20	19.8
21-26	63	62.4
27-32	18	17.8

Among all 19.8% out of total respondents BMI were (15-20), 62.4% were (21-26), and 17.8% were (27-32).

Finding from Key Informant Interviews (KII):

This study was carried out on 15 eligible doctors who were working in the related field. The most important findings from KII, 80% respondents are supported the cause of risk factors of male infertility was azospermia and 20% respondents explain different reasons such as food habit, smoking, alcohol, traumatic injury, loss of libido etc.

Discussion

This study was carried out with an aim to find out the risk factors of male fertility among 101 respondents who had visited for treatment in hospital.

Infertility has a tremendous psychological impact on infertile couples like anxiety and depression. This disorder may increase the duration of infertility. It is estimated that about 40% of infertile couples experience anxiety and 86% experience depression.⁵

A study conducted in Kuwait by Omu et al., showed that prevalence of depression was 5.2% in infertile women and 14.9% in men.⁶ Another study in Taiwan, indicated that 40.2% of the infertile women had psychological disorders and 17% suffered from severe depression.⁷ A study in Sweden on infertile couples, reported that major depression was the most common mood disorder among infertile couples with a prevalent rate of 10.9% in females and 5.1% in males.⁸

Several studies have shown that fertility present in overweight and obese women.^{9,10} Similarly, obesity may play a role in men fertility. A study in US investigating farmers and their wives showed that 10 kg increase in the body weight may reduce fertility by nearly 10%, and the great effect for men with a body mass index (BMI) of more than 32.¹¹ A significant reduction in the number of normal motile sperm has been observed among men with BMI over 25, it also found that men

with excess fat in the thigh and suprapubic area have poor semen quality.¹² A Norwegian cohort study found that the risk of infertility is associated not only with high BMI but also with low BMI.¹³ This study shows 19.8% out of total respondents BMI were (15-20), 62.4% were (21-26), and 17.8% were (27-32).

The present study found 22.8 % respondents take alcohol and 77.2% respondents did not take alcohol. Some studies had found no association between alcohol consumption and male infertility.^{14,15} While another study found that alcohol consumption affected the reproductive system at all levels.¹⁶ A recent study in Nigeria found a significant effect of alcohol consumption on infertility especially moderate to heavy alcohol intake.¹⁷

The effect of smoking on male infertility and semen quality has been investigated in many studies on fertile and infertile men, their results are conflicting: several studies showed that smoking had an adverse influence on the semen quality specially among heavy smokers.¹⁸⁻²¹, a study in Singapore found that smoking increases the risk of infertility and there is no difference among the different smoking groups.²² This study found out of total respondents, 66.3% are smokers, and 33.7% respondent's non smoker.

Conclusion:

This study had identified a large number of men 66.3 % were smoker and 17.8% were suffering from obesity. On the other hand doctors suggested that azospermia was the main risk factors for male infertility along with other predisposing factors such as obesity, smoking and food habits. It is strongly recommended to implement a clinic based health campaign to screen cases along with a treatment and prevention program.

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