

Male Infertility Rate in Belagavi, Karnataka, India

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ABSTRACT

Introduction: Infertility is an alarming issue in medical practice. This retrospective study is aimed to find out male infertility rate in this area, Belagavi, India.

Materials and methods: Case records (2010–2017) on semen examination carried out in Sristi Fertility Centre of KAHER's Ayurveda Hospital and Medical Research Centre were evaluated on established standard basis.

Results: The total number of case records was 627. Among them 62% were infertile. Majority of infertile men were with oligozoospermia (31.41%).

Conclusion: This retrospective study invites serious attention of health authorities on this aspect.

Keywords: Case records, Male infertility, Retrospective study, Semen examination.

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INTRODUCTION

Infertility secures priority in public health. Among the various pathologies that afflict human, infertility has a special place. It has always been a major concern since ages. It has psychological, economic and medical implication resulting in stress, particularly in a social set up like ours with a strong importance on child bearing.

Male infertility is a man's inability to lead pregnancy in a fertile woman. In human it accounts 40–50%.¹ In general approximately 7% of all men are infertile.² It is a major concern for health professionals.

When couple reports for consultation of childlessness both husband and wife were thoroughly examined and investigated. Male partner with semen parameters below the normal values given by WHO (1992)³ is considered as infertile. Hence semen analysis deserves priority as this is the single most useful and fundamental investigation to understand male fertility.

The aim of this study was to find out the level of male infertility rate in this region, Belagavi, India.

MATERIALS AND METHODS

When a couple reports to Sristi Fertility Centre of KAHER's Ayurveda Hospital and Medical Research Centre, for childlessness both partners are thoroughly examined and semen examination is advised to male partner. In this retrospective study the semen evaluation reports during the period of year 2010–2017 were collected and analyzed. Semen evaluation was done strictly on WHO (1992)³ (Table 1) guidelines. Semen parameters like semen volume, total sperm count, percentage of motility and morphology were given more emphasis and the first time submitted semen sample was considered for this study and subsequent reports, if any were excluded. Sristi Fertility Centre laboratory gave following instructions to patients prior to collection of semen sample. (1) An abstinence of 3–5 days⁴ was to be maintained. (2) Collection was to be done close to the laboratory. (3) Collection time was restricted, 9 to 10 in the morning. (4) Masturbation was advised as the method of collection and (5) sample was to be collected to a wide mouth sterile container provided from the laboratory.

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The semen analysis was done within 30 minutes after liquefaction of the sample.

RESULTS

The total number of semen evaluation studied was 627. Results are given in Table 2.

The study showed 61.85% of semen samples included in the present retrospective study were of infertile men.

DISCUSSION

Causes of infertility are categorized as male, female, combined male and female factors and infertility due to unknown cause. Infertility rate is reported as 5–15%.⁵ Male is labeled as infertile when his

Table 1: Values for normal semen parameters

Total sperm count	>40 million/mL
Motility	>50 (%)
Morphology	>30 (%)

Table 2: Normal and different pathological conditions seen in total study

<i>Semen evaluation report</i>	<i>Number of patients</i>	<i>Total percentage</i>
Normozoospermia	239	38.11
Oligozoospermia	197	31.41
Oligoasthenoospermia	131	20.89
Asthenozoospermia	25	3.98
Teratozoospermia	5	0.79
Azoospermia	30	4.78
Total	627	99.96
Total no of infertility cases	388	
Percentage of male infertility	61.85	

Table 3: Male infertility rate from different countries

<i>Country</i>	<i>Male infertility (%)</i>
Bangladesh ²⁴	29
France ²⁵	35
Israel ²⁶	28
Pakistan ²⁷	26
Singapore ²⁸	23
The United Kingdom ²⁹	30
West Germany ³⁰	28
India–Ahmedabad ³¹	64
Ahmedabad ³²	76
Bengaluru ³³	35
Delhi ³⁴	84
Jamnagar ³⁵	75
Jamnagar ³⁶	45
Kolar ³⁵	42
Wardha ³⁷	65
Present study	62

semen evaluation report is observed below that of normal values (WHO 1992).³ It is also known the value of semen is an important factor in determining his health.⁶ In the present retrospective study the semen examination reports were analyzed as per WHO (1992) guidelines.³ A total number 627 reports were available in which 62% of them were infertile.

In clinical practice occasionally it was observed that male partner claims himself as fertile and tried to exclude semen examination. Reasons for male infertility were detailed by different authors. They are hormonal imbalances,⁷ genital defects,⁸ medications,⁹ lifestyle,¹⁰ occupational,¹¹ addictions to smoking,^{12,13} tobacco¹⁴ and alcohol^{15,16} environmental factors,¹⁰ intake of caffeine,¹⁷ exposure to pesticide like nematocide¹⁸ and dichloro diphenyl trichloroethane (DDT)¹⁹ and exposure to cell phones, computers, laptops and similar other electronic items.²⁰ The semen evaluation and its important role in assessing male infertility are discussed at different levels.^{2,21–23}

In the present retrospective study the infertility rate was observed as 61.85% (Table 2). Oligozoospermia (31.41%) was seen more than any other abnormalities (Table 2). Cases of teratozoospermia was less than 1%. This is a very rarely seen abnormality in our country.^{11,16,31–37}

The infertility rate we observed is compared to that reported by different authors from different parts of globe (Table 3).

The incidence is highly alarming in our country. It varied from 35% to 84% (Table 3). Almost all results reported are studies carried out using semen of persons reported for infertility.

Delhi being highly polluted may be responsible for poor semen in 84% of total cases.³⁴ In this retrospective study where semen records were scrutinized and 62% of them were infertile. Some of their partners may also be infertile, and which is not known and is beyond the scope of this study.

In conclusion in this retrospective study, we observed male infertility rate as 62% in this part of our country.

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