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Original research article

A study on clinical profile of infertility cases attending tertiary care hospitals for treatment

[1]Dr. Chandrika M, [2]Dr. Ashwin GH, [3]Dr. Lingaraju N, [4]Dr. Naveen Prasanna

[1]Consultant Gynecologist, JSS Hospital, Chamarajnagar, Karnataka, India

[2]Senior Resident, Department of OBG, KIMS, Hubli, Karnataka, India

[3]Assistant Professor, Department of ENT, CIMS, Chamarajnagar, Karnataka, India

[4]Associate Professor, Department of OBG, KIMS, Hubli, Karnataka, India

Corresponding Author:

Dr. Naveen Prasanna

Abstract

Infertility of no obvious cause or after correction of the factor identified as responsible for infertility. Unexplained infertility is diagnosed when all of the standard elements of the infertility evaluation yield normal results. The incidence of unexplained infertility ranges from 10% to as high as 30% among infertile populations depending on diagnostic criteria. Patients admitted in hospital with H/O infertility was evaluated by taking a detail history, performed a clinical examination and relevant investigation. After obtaining anesthesia fitness, suitable patient was posted for hysterolaparoscopy procedure under general anesthesia & intra op findings was documented. The majority of the study subjects that is 20 (40%) were in the age group of 26-30 yrs. 17 (34%) were in the age group of above 30 years. There were 13 (26%) in the age group of 21-25 years. The youngest patient in the series was 21 years. The oldest patient in the series was 36 years. These were no patients over the age of 36 years. This may not exactly reflect the decrease in infertility at a latter age but may be the reluctance of the women in our society to seek treatment for infertility over 36years. Out of 50 patients majority were 6-10years of duration that is 54%, 1-5 years duration 42%, more than 10 years 4%.

Keywords: Clinical profile, Infertility, Unexplained infertility

Introduction

Infertility is defined as failure of couple to conceive after 1 year of unprotected sexual intercourse in women. Primary Infertility is the inability to conceive in a couple who has had no prior pregnancies [1].

Secondary Infertility is the inability to conceive in a couple who has had at least one prior conception, which may have ended in a Live Birth, Still Birth, Miscarriage, Induced Abortion or Ectopic Pregnancy. It is estimated that 10 - 15% of married couples are infertile [2].

Infertility of no obvious cause or after correction of the factor identified as responsible for infertility. Unexplained infertility is diagnosed when all of the standard elements of the infertility evaluation yield normal results. The incidence of unexplained infertility ranges from 10% to as high as 30% among infertile populations depending on diagnostic criteria. At a minimum the diagnosis of unexplained infertility implies a normal semen analysis, objective evidence of ovulation, a normal uterine cavity and bilateral tubal patency [3].

Marleschki's universal Hysteroscope has an outer diameter of 4mm. This eliminates the necessity for cervical dilatation and anasthesia even in nulliparas. Uterine distension is unnecessary. There is no need of light source. Uterine bleeding does not interfere with the procedure. Interpretations of the finding requires experience. No panoramic view is possible because only surfaces in contact with tip of the Hysteroscope are visible [4].

Incorporates a facility to magnify from x1 to x150 to allow examination of vascular and cellular structure of the endocervix & endometrium. When used at high magnification, the lens is in contact with the surface & complements colposcopy when the squamo columnar junction is within the endocervical canal. Fine cellular detail can be observed after vital staining with Waterman's blue. An operating sheath which allows scissors, diathermy, probes & biopsy forceps to be introduced for intra uterine surgery under direct vision is optimal [5, 6].

Methodology

1. **Study Population:** Infertile women admitted in Hospital
2. **Study design:** Prospective study
3. **Sample Size:** 50
4. **Inclusion Criteria:**

- Women with primary or secondary infertility as per WHO definition
- Normal serum level of TSH, FSH, LH, prolactin.

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5. Exclusion Criteria:

- Medical disorders which are contraindication for general anesthesia
- Female genital tract cancer
- Male factor found abnormal
- H/O Tubectomy

Methods of Collecting Data

Patients admitted in hospital with H/O infertility was evaluated by taking a detail history, performed a clinical examination and relevant investigation. After obtaining anesthesia fitness, suitable patient was posted for hysterolaparoscopy procedure under general anesthesia & intra op findings was documented.

Assessment Criteria

- Type of infertility
- Duration of infertility
- Menstrual History
- Past History
- Per Speculum findings
- Per Vaginal findings
- Laparoscopic findings of Uterus, Tubes, Ovaries and Peritoneum
- Hysteroscopy findings, CPT (Chromopertubation test)

Results

Table 1: Distribution of Study Subjects according to the Age Group (N = 50)

Age (in Years)	No.	Percent
21-25	13	26.0
26-30	20	40.0
>30	17	34.0
Mean (SD)	28.74 (3.81)	
Range	21-36	

The majority of the study subjects that is 20 (40%) were in the agegroup of 26-30 yrs. 17 (34%) were in the age group of above 30 years.

There were 13 (26%) in the age group of 21-25 years.

The youngest patient in the series was 21 years. The oldest patient in the series was 36 years. These were no patients over the age of 36 years.

This may not exactly reflect the decrease in infertility at a latter age but maybe the reluctance of the women in our society to seek treatment for infertility over 36 years.

Table 2: Distribution of Study Subjects according to the Type of Infertility (N=50)

Type of Fertility	No.	Percent
Primary	36	72.0
Secondary	14	28.0

Out of 50 study subjects evaluated 36 were primary infertility and 14 secondary infertility

Table 3: Distribution of Study Subjects according to the Duration of Infertility (N=50)

Duration of Infertility	No.	Percent
1-5	21	42.0
6-10	27	54.0
>10	2	4.0
Mean (SD)	6.32 (2.81)	
Range	1.5-12.0	

Out of 50 patients majority were 6-10years of duration that is 54%, 1-5 years duration 42%, more than 10years 4%.

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Table 4: Distribution of Study Subjects according to the Parity (N=50)

Parity	No.	Percent
Nulli Gravida	36	72.0
Abortion 1	7	14.0
Abortion 2	1	2.0
Para 1 Living 1	5	10.0
Para 1 Living 0	1	2.0

Out of 50 study subjects, 36 were nulligravida that is primary infertility.14 were secondary infertility. Among secondary infertility 8 had abortion, 5 had previous 1 living child, 0ne study subject was P1L0.

Table 5: Distribution of Study Subjects according to the Mode of Delivery among Secondary Infertility (n=14)

Mode of Delivery	No.	Percent
Full-Term Vaginal Delivery	3	21.4
LSCS	3	21.4
Abortion	8	57.1
Total	14	28.0

Out of 14 study subjects 8 had abortion, 3 had full term vaginal delivery, 3 had LSCS.

Table 6: Distribution of Study Subjects according to the Clinical Features (N=50)

Clinical Features	No.	Percent
Excessive Hair Growth	4	30.8
Acne	4	30.8
Obesity	5	38.5
Total	13	26.0

Out of 50 study subjects, 5 had obesity, 4 had excessive hair growth, 4 had acne.

Table 7: Distribution of Study Subjects according to the Menstrual Cycle (N=50)

Menstrual Cycle	No.	Percent
Regular	29	58.0
Infrequent Cycles	17	34.0
Heavy Menstrual Bleed	1	2.0
Not Attained Menarche	1	2.0
Scanty Menstrual Bleed	2	4.0

Out of 50 study subjects 29 (58%) had regular cycles, 17 (34%) had infrequent cycles, 2 (4%) had scanty menstrual bleed, 1 (2%) had heavy menstrual bleeding, 1 (2%) has not attained menarche

Discussion

Infertility is defined as failure to achieve pregnancy within a year of regular unprotected intercourse. Diagnostic laparoscopy is the standard means of diagnosing the tubal pathology, peritoneal factors, endometriosis and intra-abdominal causes of infertility. Laparoscopy often reveals pelvic pathology as endometriosis, PCOD, pelvic and periadenexal adhesions that result in change of treatment.

In our study, a total of 50 women underwent hysterolaparoscopy. Mean age was 28.74 years. In hysteroscopy, endometrial polyp was detected in 2 (4%) cases, cervical stenosis in 2 (4%) cases and submucous fibroid in 1 (2%) cases, 3 (6%) case of septate uterus was indentified. 40 (80%) patients had normal hysteroscopy findings. In laparoscopy, Polycystic Ovarian Disease (PCO) were detected in 13 (26%) patients and endometriosis in 5 (10%) patients. Bilateral tubal blockage was demonstrated in 5 (10%) cases and unilateral occlusions were 4(8%) cases.

Pelvic adhesions were revealed in 9 (18%) cases and myomas in 7 (14%) cases.

Uterine anomaly was found in 5 (10%) cases, 2 (4%) case of Fitz-Hugh-Curtis syndrome was noted. 24 (48%) patients had normal laparoscopy findings.

In evaluation of female infertility a combined laparoscopy and simultaneous hysteroscopy provides a best approach to diagnose the causes. Diagnostic hysteroscopy offers a reliable evaluation of the uterine cavity and subsequent detection of intrauterine disease. Complications rates of diagnostic hysteroscopy are as low as 0.012%.Mean prevalence of uterine malformation in general population and in the population of fertile women is approximately 4.3%, in infertile patients approximately 3.5% and in patients with recurrent pregnancy losses approximately 13%. The incidence of uterine anomaly is 7.6%.Anomalies of the uterus are considered to be one of the reasons for infertility in women, and for this reason diagnostic hysteroscopy is fundamental in screening for infertility.

With the view of the low complication rates, minimal time requirement and a negligible effect on the

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post-operative course hysteroscopy could be performed on all infertile patients undergoing diagnostic laparoscopy.

In the present study out of 50 cases for infertility evaluated, primary infertility were 36 (72%) and secondary infertility were 14 (28%), which was in comparison with study group of Borchia Y.G *et al.* (2011) [7], where primary infertility were 35 (70%) and secondary infertility were 15 (30%) out of 50 patients studied.Primary infertility study group mean duration of infertility 6.1 years in our study, 5.1 years in sairem, *et al.* study [8].

Secondary infertility study group mean duration of infertility 6.6years in our study, 4.9 years in sairem,et.al study. There is no significant difference in duration of infertility in both study.

Majority of study subjects belongs to age group of 26-30 years that is 40% in our study,which is comparable to 35.7% in Naneware, *et al.* study [9].next commonest being 31-35 years age group.

Majority of study subjects had normal menstruation that is 40% in godinjak Z, *et al.* [10] and 58% in our study. Infrequent cycles is commonest among menstrual abnormalities that is 36% and 34% respectively.no patient had frequent cycles in both study.

Conclusion

- The most common age group was between 26 to 30 years which is 20(40%).
- 17 (34%) of them had infrequent cycles, 1 (2%) of them had heavy menstrual bleeding, 2(4%) patient had scanty flow.
- Out of 14 cases of secondary infertility, 3 (21.4%) of them had previous caesarean delivery, 3 (21.4%) had previous vaginal delivery, 8 (57.1%) of them had previous miscarriage.

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