The Prevalence and Etiological Factors Among Infertile Patients at Fayoum city

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Abstract
Aim of study was to explore the prevalence and etiological factors among patients in Fayoum city. **Design** the study was done at outpatient clinic of gynecological and Andrology in Fayoum university hospital, Egypt An observational Cross-sectional research was used in this study. Subjects of the study were 540 infertility patients (210 male and 330 female) either primary or secondary infertility. **Tools of data** collection were interviewed questioner, for female and male patients as" personal data, sexual problems, …. Etc" and statistical record about rate of male & female patients for one year. Methods of this study began on October 2012 and finished on September 2013, data was obtained through face to face interview. **Results** of this study revealed that the percentage of infertile female in Fayoum university hospital was 57.6% of all attended female to Gynecological outpatient. While infertile male was 24% of all attended male to Anderology outpatient. **Conclusion** the majority of infertile male had primary infertility and more than two thirds of infertile female had secondary infertility. **Recommendation** it's necessary to make educational programs to increase fertility awareness of infertile patients / couples and methods of treatment.

Keywords: Anderology, Etiological Factors & Infertility.

Introduction
Infertility is "the failure of a couple to conceive a pregnancy after trying to do so for at least one full year". In primary infertility, pregnancy has never happened. In primary infertility, one or the two individuals from the couple have already considered, yet can't imagine again following an entire year of endeavoring **(WHO, 2012).**

Overall infertility is a worldwide medical problem and an issue of worldwide extents, as **Sudha, et al., (2013)** that influences roughly 6.1 million couples to encounter infertility every year, or 10% of the regenerative age populace, as indicated by the American culture for conceptive pharmaceutical (2010) with a rate in Egypt around 20% to 27% of all couples

Different known and obscure variables influence infertility. Female factor infertility is identified in around 40% of cases; males calculate infertility around 40% of cases. Remaining 20% fall into a class of joined (both male and female) or unexplained infertility **(Petropanagos, et al., 2015)**.

Remedial correspondence is the primary strategy for appraisal and mediation identified with infertile patients. Utilize an assortment of correspondence systems, for example, undivided attention and investigation to urge the accomplice to express their feelings sincerely. Giving security and acknowledgment of their feelings urge the accomplices to acknowledge their emotions both positive and negative. Talk about conceivable contrasts in the manners in which the man and the woman convey **(Murray & McKinney, 2014).** So the investigator studied the frequency of male and female infertility, its etiological factors

Significance of the study
Infertility is a typical issue. In the U.S, 10 to 15% of couples are infertile. Be that as it may, infertility isn't the same as sterility, where there is no plausibility of origination. Up to 15% of couples are infertile, however just 1% to 2% of those are clean and half of the infertile couples who look for help, in the end, imagine, either normally or with restorative help. The rate of infertility in Egypt is 12 %, 64 % out of them are due to female factors, while 20.5 % are due to male factors **(Robertson, 2015).**

Aim of study
was to explore the prevalence and etiological factors among patients in Fayoum city.

Research question
What are prevalence and causes of infertility at Fayoum city?

Setting: This study was conducted at outpatient clinic of Gynecology and infertility and Andrology clinic Fayoum University Hospital, Egypt. The hospital provides services for all patients that come from rural and urban areas in Fayoum governorate. Gynecology and infertility clinic work every day a week except Tuesday and Friday, it receives approximately 6 infertile patients daily.

Andrology clinic work on Sunday only, it receives about 5 patients weekly.

Tools of the study

Female part: Structured face to- face questionnaire for female

I-**Interview questionnaire for female infertile patients incorporates the accompanying parts :**

• **Part 1:** Personal attributes (age, address, instructive level, habitation, time of marriage, and occupation).

• **Part 2:** Marriage history

• **Part 3:** Obstetrical history if the display (Gravidity, equality, premature births, stillbirth, No of living kids).

• **Part 4:** Gynecological history with respect to infertility (period of menarche, the normality of monthly cycle, sort of infertility, term, research facility and symptomatic examinations, and restorative treatment).

Male part: Interview questionnaire for male infertility patients incorporates the accompanying parts :

• **Part 1:** Personal qualities (age, address, instructive level, habitation, time of marriage, and occupation).

• **Part 2:** Marriage history (No. of marriage and years of marriage).

• **Part 3:** Data with respect to infertility (sexual issues as discharge, erection issues, sperm disfigurement, sort of infertility, length, research center indicative examinations, and restorative treatment).

The third instrument: statistical record about rate of male and female patients for one year

Pilot study:

A pilot considers was completed, including 10% of the examination subjects (45 patients) to assess the effectiveness, legitimacy, and dependability of apparatuses, and to do any alterations if necessary. To evaluate the important time required for every patient to gather their related information those patients were incorporated into the investigation. The pilot considers began in September and finished in October 2012.

Methods

At first, The investigator gave full attention to clients, greet them in a respectful manner and introduce herself, ask them how can she help them, tell them that she will not tell others what they say, the investigator had explained what will happen during the visit, and had an oral agreement to participate in the study, describing physical examinations and laboratory tests, finally conduct counseling in a place where no-one can overhear conversation.

The data related to this study was obtained through face to face interview. A prospective observational Cross sectional design was used in this study. Sample size was estimated to be 540 +10% individuals to guard against non- respondent's rate. The computed sample size plus expected dropout rate was 600 prospective patients (210 male and 330 female).

The investigator estimated the prevalence of male and female infertility. The investigator collected data from male and female infertile patients and registered them in separate questioner, then identifies investigations that are done for both male and female infertile patients to determine etiological factors of infertility.

The investigator started with personal data as (age, job, education, ….. etc), obstetrical and gynecological data for female as (gravida, para, abortion, menstrual history, infectious diseases, …. etc), andrological history of male as (varicoceles, ejaculation disorders, infectious diseases, ... etc), then ask about health status and diseases as (heart disease, diabetes, hypertension, …. etc) for both, the investigator asked if they made any analysis as (FSH, LH, Semen fluids, ….etc).

The investigator collected data from gynecology and infertility clinic on Saturday, Monday, Wednesday, and Thursday. And collected from the Andrology clinic on Sunday, for one year started from October 2012 to September 2013.

The interview took about 30 min for each client, some clients had positive interaction and cooperated with investigator, but others had efforts to answer about questions they was stressed and felt shame.

Administrative Ethical Considerations

An official authorization was gotten from the senior member of the workforce of Nursing coordinated to the supervisor of Fayoum University Hospital, to the outpatients of Gynecology and infertility and facility of Andrology to gather the vital information. Endorsement of patients was acquired to be met; secrecy of the patient's data was kept. The survey will dispose of toward the end of the investigation of the paper waste.

Statistical design

A measurable examination was finished utilizing programming SPSS rendition 16 for windows. Illustrative insights (recurrence, rate, range, mean and standard deviation) were figured, and trial of hugeness (chi-square test and T-test).
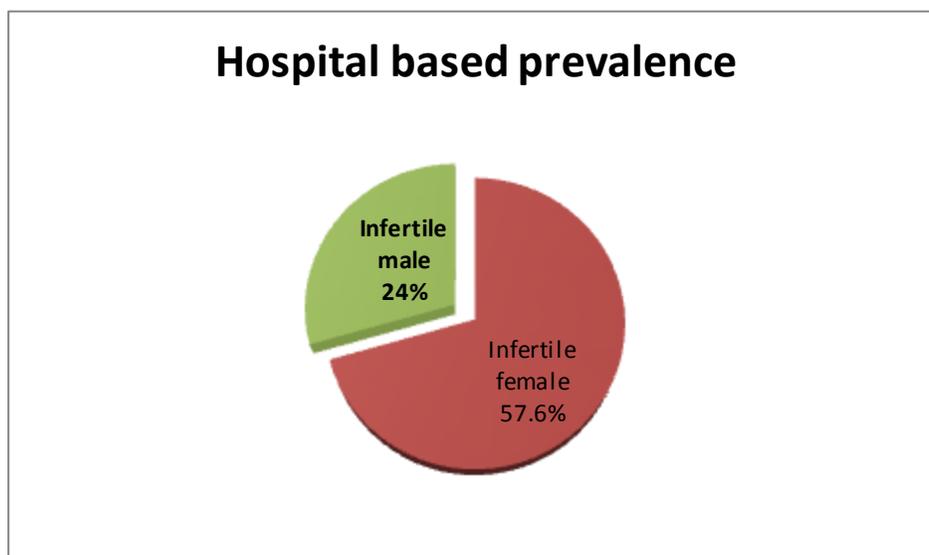
Results

Table (1): Distribution of infertile male according to laboratory investigations (N= 210).

Analysis results	No	%
1) **Semen analysis**	N= 210	
- **Normal**	106	50.5
- **Abnormal**	104	49.5
2) **Testosterone test**	N= 210	
- **Normal**	108	51.4
- **Abnormal**	14	6.6
- **None**	88	42

*Shows that nearly half of male (**49.5%**) has sperm problems and only (**6.6 %**) have abnormal hormonal results.*

Table (2): Distribution of male & female according to their infertility history (N= 540)

| Andrology history	No	%
1) **Male etiological factors**	N= 183	
- **Sperm problems**	104	49.5
- **Ejaculation problems**	51	24.3
- **Erection problems**	14	6.7
- **Hormonal disturbances**	14	6.7
- **Others:**		
• **Urinary problems**	N= 80	
• **Hyperthermia**	48	22.9
• **X-ray exposure**	16	7.6
• **Mumps**	13	6.2
	3	1.4
2) **Female etiological factors**	N= 330	
- **Ovarian**	81	24.5
- **PID**	45	13.6
- **Endometrial**	15	4.5
- **Fallopian tube**	4	1.2
- **Unknown &/ combined**	185	56.1
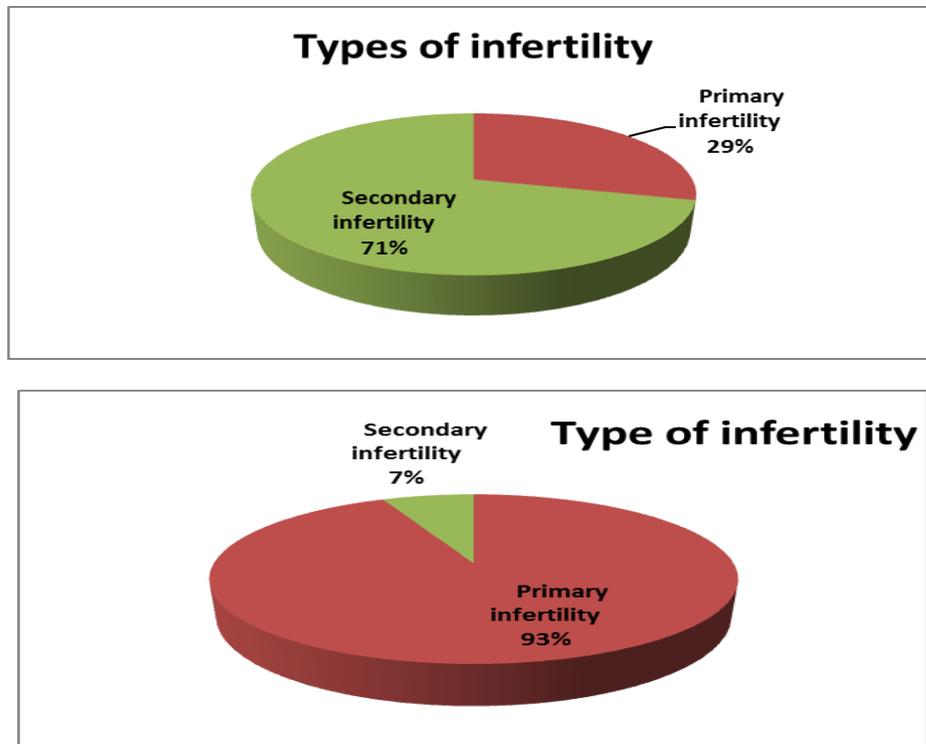
Table (1): Shows that nearly half of male (49.5%) has sperm problems and only (6.6 %) have abnormal hormonal results.

Table (2): Shows that nearly half of male (49.5%) have sperm problems and only (4.5%) suffer from endometrial factors.

Discussion

Aim of study was to explore the prevalence and etiological factors among patients in Fayoum city. Research question what are prevalence and causes of infertility at Fayoum city?

As per (WHO) was reported that infertility in Egypt influences 12 % of Egyptian couples, of these ladies, 4.3 % experience the ill effects of primary infertility (have never been pregnant), and 7.7 % experience the ill effects of primary infertility (have been pregnant previously, regardless of whether the pregnancy finished with a fetus removal or an ectopic pregnancy) **(Sallam, 2013).**

In the present study, the predominance of female infertility was the greater part while an almost quarter of the male. These outcomes can't help contradicting **Agarwal, et al., (2015)** who examined unique view on male infertility around the globe in Central and Eastern Europe and Australia, there consider was done 850,000 infertility male they found that the predominance of infertile male extended from 2.5% to 12%. What's more, can't help contradicting **Gokler, et al., (2014)**, who considered Prevalence of

infertility and loneliness among female aged 18-49 years who are living in semi-rural areas in western Turkey, their examination was completed on 570 infertility females they found that the pervasiveness of infertility female running from 3.2 to 20.0%. This distinction clarified by the pervasiveness of infertility in the present investigation was a doctor's facility based while the others were group based.

The present study, demonstrated the primary infertility display in the greater part of infertile males and in excess of one-fourth of infertility female, while secondary infertility exhibit in under two-fifths of infertile male and almost seventy-five percent of the infertile female. These outcomes concur with **Gokler, et al., (2014)**, they found that the greater part of concentrated female experienced secondary infertility. Then again can't help contradicting **Begum, et al., (2013)**, who examined etiological factors of infertility, in a referral hospital (BSMMU, Bangladesh), their examination was completed on 100 couples, they found that the predominance of primary infertility was 56% and secondary infertility was 44% .

In the present study, the female reasons for infertility constitute almost half, (Fallopian, endometrial, ovarian and PID). Male causes constitute the lion's share, this outcome can't help contradicting **Karamidehkordi & Roudsari, (2014)**, who body image and its relationship with sexual function and marital adjustment in infertile women in Iran, their

investigation was performed on 130 infertility females they discovered not as much as half of infertile female identified with female variables while, male elements constitute in excess of one third of subjects, and in the remaining was a blend of male and female elements or obscure. The present investigations can't help contradicting **Peyromusavi, et al., (2016)**, who contemplated factors influencing the reaction, to infertility treatment: an instance of Iran they found that male factor was in charge of 25 to 40% of infertility in couples.

According to educational level the present study found that half of infertile female received primary education and most of them were housewife, which disagrees with **Karamidehkordi & Roudsari, (2014)**, who studied body image and its relationship with sexual function and marital adjustment in infertile women in Iran, the study was performed on 130 infertile females they found one third of female received university education and nearly one third were employee.

In the present study, the mean time of barren female was 28.30+ 5.46 and the mean time of fruitless male was 30+6.26. These can't help contradicting **Karamidehkordi & Roudsari, (2014)**, who found the mean period of females was 27+ 4.58 and can't help contradicting **Rashidi et al., (2012)**, who studied health-related quality of life in infertile couples receiving IVF or ICSI treatment in Iran, on514 women and 514 men, who found the mean time of infertile male was 35.9 + 6.0, while infertile female was 31.4 + 5.9 This differentiation comes from various networks, societies, and dimension of training.

The present study delineates that in excess of 33% of infertile females had a background marked by healing methodology (mediations) this outcome can't help contradicting **Peyromusavi et al., (2016)**, who found that the greater part of study gather had a past filled with corrective techniques (interventions).

Conclusion
The outcomes reasoned that the hospital-based prevalence of infertile female at Fayoum university hospital was more than half of all went to the female to Gynecological outpatient. The main causes of female infertility were the hormonal aggravation and male infertility was sperm issues.

Recommendations
Based on the results of the present study, the following recommendation is suggested, Increase fertility awareness of infertile patients / couples by educational programs and methods of treatment.
Psychological training programs for infertile patients / couples to deal positively with society and cope with infertility through group therapy and lectures about problem.

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