ORIGINAL ARTICLE

Frequency of Polycystic Ovarian Syndrome in Infertile Women

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ABSTRACT

Aim: To assess the sonographic frequency of polycystic ovarian syndrome in infertile women**.**
Study design: Descriptive case series
Place and duration of study: University Institute of Radiological Sciences & Medical Imaging Technology Lahore from 1st October 2020 to 31st December 2020.
Methodology: One hundred and thirty eight patients were included. Toshiba and Ultrasound machine (Nemiox G) with a standard gray scale 5-7 MHz convex probe was used. Transvaginal scan and trans-abdominal scan was performed.
Results: The mean age was 31.84±3.32 years. 58.7% patients having polycystic ovarian syndrome and 41.3% patients having no polycystic ovarian syndrome. Among positive PCOs patients; 4.9% patients had primary infertility and 95.1% patients had secondary infertility.
Conclusion: Frequency of PCO's in infertile patients was (58.7%) found to be significantly high as compared to other pathologies.
Keywords: Ultrasound (US), polycystic ovary syndrome (PCOS).

INTRODUCTION

Polycystic ovary syndrome (PCOS) is common cause of infertility and endocrine disorder affecting women both physically and psychologically which may also disturb the quality of health life. Various studies have reported a prevalence of 5-10%, of all females and 4-6% of adolescent girls and young women[1] for the first time in 1935, the classic form of PCOS was described by Ashtyn and Leventhal[2]. A chronic anovulation syndrome associated with excess of hydrogen is termed as Polycystic ovarian syndrome and can be referred as hyper-androgenic anovulation. There are generally three criteria for the diagnosis of PCOS i.e., ovulatory dysfunction, hyper-androgenism, polycystic ovarian morphology on ultrasound[3]. The estimated prevalence of PCOS in women of reproductive age is about 8-13% which can vary. Anovulation is a major problem that most of the women with PCOS have problems like dysfunctional bleeding and infertility comes along with this[4]. One of the most common causes of infertility is PCOS. Several studies show that certain menstrual abnormalities such as amenorrhea, oligomenorrhoea or obesity can result in infertility[5,6]. With this some dermatological features such as acne, hirsutism, seborrhea, alopecia are present. All these symptoms not only have an impact on quality of life but also come up with heterogeneous phenotype of PCOS. Ultrasound is, indeed, the most effective instrument of initial imaging; it is a profoundly administrator subordinate and requires patient coordination[7,8].

Ultrasound is still the basic preference methodology for gynecological patients. Ultrasound has evolved into a technique that can provide full and often all similar data that are relevant for evaluating or rejecting anatomical differences from the female reproductive tract standard[9,10]. The advantage of ultrasound real-time scanning is that the pelvic organ can be examined in order to evokes a person's complaints and therefore to relate symptoms with particular pelvic anatomical locations[11,12]. Although by its sensitivity, ultrasonography has widened the clinical spectrum of PCOS, this has led to a reduction in the numbers of cases diagnosed with `idiopathic hirsutism' and `idiopathic anovulation'. Establishing the diagnosis of PCOS is, and will always be, a matter of good clinical sense[13,14]. On the basis of the problems regarding infertility in women due to polycystic ovarian syndrome which is one of the most common causes of infertility. In our country, majority of our population is unaware of this disease and other related problems.

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MATERIAL AND METHODS

This descriptive case series was carried out at University Institute of Radiological Sciences & Medical Imaging Technology Lahore from 1st July 2019 to 31st December 2019 and 138 patients were included. Toshiba and Ultrasound machine (Nemiox G) ultrasound machine with a standard gray scale; 5-7 MHz convex probe was used. One hundred and thirty eight patients were included. On the basis of inclusion and exclusion criteria, the infertile women were included and fertile women were excluded. Patient was lying in supine position. Ultrasound gel was placed on transducer and skin. For sagittal view of uterus, TA probe was positioned on longitudinal access. For transabdominal view of uterus and both ovaries, transabdominal probe was placed on transverse scan. The data was entered and analyzed through SPSS-24.

RESULTS

The mean age came out to be 31.84±3.32 years and 57(41.3%) patients having no PCOS and 81(58.7%) patients having PCOS respectively (Table 1). The most common symptom of PCOS was hirsutism and 2nd common symptom being amenorrhea. Hirsutism constituted 33 patients i.e. 23.9% of total cases, followed by amenorrhea in 26 (18.8%) cases, acne in 20(14.5%) cases. 11(8%) patients came with acne and hirsutism and 11(8%) patients came with obesity. 10(7.2%) patients came had oligomenorrhea, 5(3.6%) patients came had amenorrhea and acne, hair loss and acne in 5(3.6%) cases and 5(3.6%) patients had obesity and hirsutism. Obesity and acne in 4 patients, oily skin and 4 patients had acne. 3 patients had oligomenorrhea and hirsutism. Only single patient has irregular menstruation (Table 2). Forty nine patients had primary infertility and 89(64.5%) patients had secondary infertility (Table 3). Among positive PCOs patients; 4.9% patients had primary infertility and 95.1% patients had secondary infertility (Table 4).

Table 1: Descriptive statistics (n=138)

Variable	No.	%age
Age (years)	31.84±3.32	
Polycystic ovarian syndrome		
Negative	54	41.3
Positive	81	58.7

Table 2: Frequency of symptoms (n=138)

Symptoms	No.	%
Hirsutism	33	23.9
Amenorrhea	26	18.8
Acne	20	14.5
Acne + Hirsutism	11	7.9
Obesity	11	7.9
Oligomenorrhea	10	7.2
Amenorrhea + Acne	5	3.6
Hair loss + Acne	5	3.6
Obesity + Hirsutims	5	3.6
Obesity + Acne	4	2.8
Oily skin + Acne	4	2.8
Oligomenorrhea + Hirsutism loss	3	2.2
Irregular menstruation	1	0.7

Table 3: Frequency of staging of infertility

Stage	No.	%age
Primary	49	35.5
Secondary	89	64.5

Table 4: Comparison of PCOS according to infertility staging

PCOS	Primary infertility		Secondary infertility	
	No.	%	No.	%
Negative	45	78.9	12	21.1
Positive	4	4.9	77	95.1

DISCUSSION

In the present study, 138 infertile women with PCOS age range between 27-39 years with mean age was 31.84±3.32 years. This correlated well with previous study done by Mandrelle et al[15], they evaluated 120 consecutive women with PCOS and showing the mean age of 26.15±4.2558. This study showed that 57(41.3%) patients were infertile and 81(58.7%) patients were fertile. The most common symptom of PCOS was hirsutism. These constituted 33 patients i.e., 23.9% of total cases, while in Azziz et al[16] study hirsutism rate was 6.8%. The lower rate reported in the latter study is consistent with the fact that many hirsute women do not seek physician evaluation. Alternatively, we observed oligomenorrhea in 10(7.2%) patients. While in 2004, Azziz et al[16] showed the prevalence rate of menstrual0020dysfunction of 22.8%. In the present study, 11 patients found obesity (8%). In 2000, Asunción et al[17] study shows the prevalence of obesity to be 30%. However, the occurrence of obesity in PCOS experiential in Greek women (38%)[18-21]. According to their results, obesity is significantly ethnic difference in the prevalence of PCOS.

CONCLUSION

Frequency of polycystic ovarian syndromes in infertile patients was (58.7%) found to be significantly high as compared to other pathologies.

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