

# CONTEMPORARY PROFILE OF THE PATIENT WITH POLYCYSTIC OVARY SYNDROME (PCOS)

VICTORIA VOLOCEAI<sup>1</sup>

<sup>1</sup>“Nicolae Testemițanu” State University of Medicine and Pharmacy, Chișinău

**Keywords:** polycystic ovary syndrome, patient profile, medical determinants

**Abstract:** Background: The aim of our research included identifying the medical and social specifics of contemporary profile in PCOS patients in the Republic of Moldova in order to improve the diagnose and the management of treatment of this disease. Materials and Methods: There were analysed 138 patients who were selected according to the Rotterdam criteria regarding PCOS, who were hospitalized in the Department of Aseptic Gynecology at the Municipal Clinical Hospital Nr.1 of Chișinău city. Results: Some medical and social determinants had either a direct or indirect role in the evolution of PCOS. In the current study, we determined that the main impact had the body mass index (BMI), irregular menstrual cycle, family history, the hormonal level, the duration of treatment and infertility. Conclusions: We have compiled the contemporary profile of PCOS patients - young women in reproductive age, usually overweight, who have irregular menstrual cycle, a family history of PCOS and infertility for nearly 1 year of regular sexual life.

## INTRODUCTION

Polycystic ovarian syndrome (PCOS) is the commonest cause of anovulatory infertility in about 75% of women of reproductive age group.(1) The syndrome first defined by Stein and Leiventhal in 1935 consisted of irregular anovulatory bleeding, obesity, hyperandrogenism, abnormal ovarian morphology and atypical gonadotrophin secretions.(2,3) Clomiphene Citrate (CC) remains the first choice of treatment in management of anovulatory amenorrhea but achievement of pregnancy occurs in about 35–40% of cases.(4) Failure to respond to CC and other drug therapies resulted in more invasive procedures such as wedge resection of ovaries, multiple ovarian biopsies and others and depend on the main criteria of PCOS.(5)

## PURPOSE

The aim of our research included identifying the medical and social specifics of contemporary profile in PCOS patients in the Republic of Moldova in order to improve the diagnose and the management of treatment of this disease.

## MATERIALS AND METHODS

There were analysed 138 clinical cases of patients who have followed Rotterdam criteria regarding PCOS, who were hospitalized at the Department of Aseptic Gynecology no. 1 of the Municipal Clinical Hospital of Chișinău. As criteria for selecting the patients, we have used the Rotterdam criteria: irregular menstrual cycle, biochemical or clinical hyperandrogenia and USG criteria for PCOS.

## RESULTS AND DISCUSSIONS

In order to be able to highlight some correlation between the age of the patients and the occurrence of PCOS, the patients were divided according to the age criteria. Regarding the distribution of the age group, we can conclude that the gathered data showed that most frequently patients with PCOS and infertility were in the age group of 23-30 years, established

in 89 (64,5 ± 4,1%) cases, the most optimal period for reproduction. We found out that in the last years, there were hospitalized and treated more than 6 patients (4,3 ± 1,7%) older than 37 years.

Figure no. 1. Distribution of laparoscopic outcome in PCOS patients

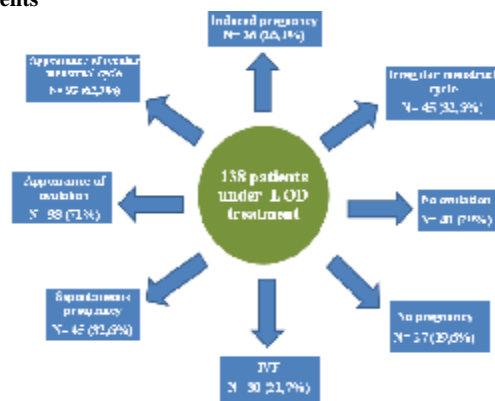
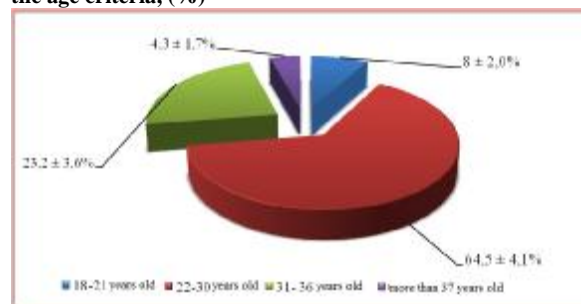


Figure no. 2. The structure of PCOS patients according to the age criteria, (%)



<sup>1</sup>Corresponding author: Victoria Voloceai, B-dul. Ștefan cel Mare și Sfânt, Nr. 165, Chișinău, Republica Moldova, E-mail: victoriavoloceai@gmail.com, Phone: 06918216

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The age of starting the menarche for the patients from the study was the following: up to 10 years in 1 (0,7 ± 0,7%) case, 11 - 13 years in 3 (26,16 ± 3,7%) cases, 14 -16 years – 66 cases (47,8 ± 4,2%), more than 17 years in 35 (25,4 ± 3,7%) cases. This criterion was available in 101 medical histories.

We appreciated that 129 patients had irregular menstrual cycle, I place oligomenoreea – 79 (57,9 ± 3,5%) cases, II – amenoreea – 50 (36,23 ± 4,3%) cases. But there were diagnosed 9 (5,8 ± 1,6%) cases ( $\chi^2=11,8$   $p<0,01$ ) of PCOS with regular menstrual cycle. Regarding the BMI criteria, our analysis showed that most of the patients had a BMI less than 25 in 76 (55,1 ± 4,2%) cases, between 26 – 30 in 32 (23,2 ± 3,6%) cases, and a BMI more than 31– 35 – 30 (21,7 ± 3,5%).

**Table no. 1. Clinical criteria of PCOS patients who were analysed**

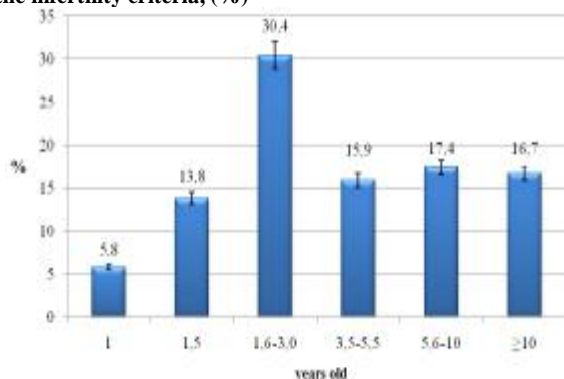
Clinical criteria	PCOS patients (n=138)	
Age, years	27,4 ± 3,1	
BMI (kg/ m <sup>2</sup> )	27,6 ± 2,4	
Menarch	14,7 ± 2,5	
Characteristics of menstrual cycle	N	%±Δ%
- Oligomenoreea	79	57,9 ± 3,5%
- Amenoreea	50	36,23 ± 4,3%
- Regular	9	5,8 ± 1,6%

As it was demonstrated in our analysis, the family history established: on the first place - mothers with PCOS – 65 (47,1 ± 4,2%), II – diabetes – 26 (18,8 ± 3,3%), on the third – arterial hypertension - 10 (7,2 ± 2,4%) cases, IV- obesity – 8 (5,8 ± 3,2%), uncomplicated – 29 (21,0 ± 2,9%).

The amount of blood loss per menstra: I place – more than 150 ml – 50 (36,2 ± 4,1%), II – 101- 150 ml – 41 (29,7 ± 3,9%), III – 30 – 100 ml – 40 (29,0 ± 3,9%), and less de 30 ml – 7 (5,1 ± 2,3%). The length of menstra I place – 3 – 7 days – 88 (63,8 ± 4,1%) cases, II – more than 7 days – 45 (32,6 ± 4,0%), III – less than 3 days – 5 cases (3,6 ± 1,2 %).

Our analysis showed that infertility criteria varied from 1 year – 8 (5,8 ± 2,0 %) cases and more than 10 years – 23 (16,7 ± 3,2 %) cases, the most frequent being between 1,6 -3 years – 42 (30,4 ± 3,9 %) cases (figure no. 3.).

**Figure no. 3. The structure of PCOS patients according to the infertility criteria, (%)**

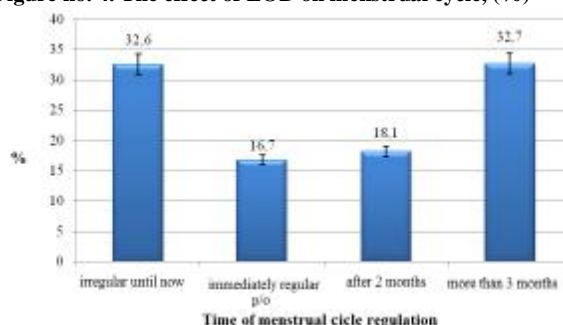


The length of ovulation induction criteria with CC showed: I place – more than 1 year 66 (47,8 ± 4,2%) cases, II place – 6 months – 28 (20,3 ± 3,4%) cases, III – more than 3 years – 17 (12,3 ± 2,8%) cases, IV – 3 months – 11 (8,0 ± 2,3%) cases.

All of the patients were declared dexamethasone-clomiphene citrate (CC) – resistant, and were treated with laparoscopic ovarian drilling (LOD) as a second line of treatment of PCOS patients. We established that: irregular menstrual cycle was in 45 (32,6 ± 3,9%) cases, became regular

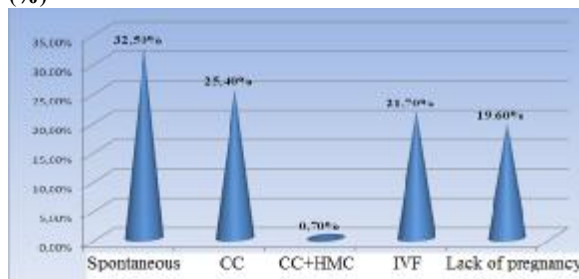
after 3 months – 45 (32,6 ± 3,4%) cases, regular after 2 months in 25 (18,1 ± 3,2%) cases and only in 23 cases it became regular immediately and maintained regular during the period of research – (16,7 ± 3,2%).

**Figure no. 4. The effect of LOD on menstrual cycle, (%)**



The effect of LOD on ovulation was absent in 40 patients – (29 ± 3,8%), spontaneous ovulation after LOD – 13 (9,4 ± 2,5%) cases, after 2 months – 34 cases (24,6 ± 3,6%), 3 months – 26 cases (18,8 ± 3,3%), 4 – 5 months – 19 cases (13,8 ± 2,9 %), 6 months and more – 6 cases (4,3 ± 1,7%).

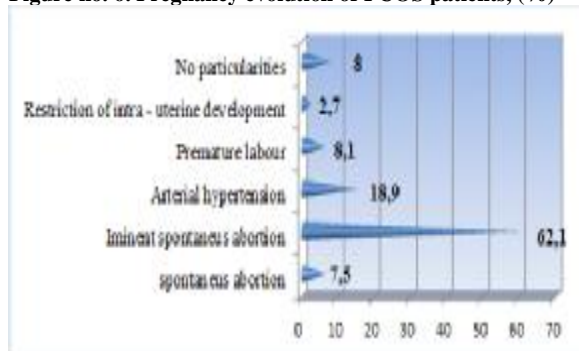
**Figure no. 5. Pregnancy rates after LOD in PCOS patients, (%)**



Pregnancy rate after LOD was - spontaneous in 45 (32,6 ± 4,0%) cases, after CC induction – 35 (25,4 ± 3,7%) cases, in association with CC + HMC – 1 (0,7 ± 0,7%), without pregnancy in 27 cases (19,6 ± 3,4%). Pregnancy rate after IVF – in 30 de cases (21,7 ± 3,5 %) (figure no. 5).

Pregnancy evolution of the patients included in our study had a symptomatic evolution in 127 patients, asymptomatic in - 11 (8,0 ± 2,3%) cases.

**Figure no. 6. Pregnancy evolution of PCOS patients, (%)**



So, pregnancy evolution was complicated especially with imminent spontaneous abortion in 69 (62,1 ± 4,1%) cases, pregnancy arterial hypertension – 21 (18,9 ± 3,1%) cases, premature labour – 9 (8,1 ± 2,1%) cases, restriction of intra - uterine development 3 (2,7 ± 1,2%) cases.

Unfortunately, spontaneous abortion was in  $9 (7,5 \pm 2,1\%)$  cases. Patients delivered by natural labour -  $93 (83,7\% \pm 4,0)$ , cesarean section-  $33$  cases ( $29,7 \pm 3,8\%$ ), lack of data in -  $6$  cases ( $3,6 \pm 1,7\%$ ).

### CONCLUSIONS

3. The results of the study have allowed us to establish the profile of the PCOS patients: young women, in the reproductive age between 23-30 years (64,5 %), with a beginning of menarche between 14-16 years (47,6%), with a BMI less than 25 in ( 55,1%), irregular menstrual cycle (95,2%). Nearly  $\frac{1}{2}$  have a family history of PCOS and suffer of endocrine infertility till 3 years.
4. LOD outcome shows that this II line treatment is an effective procedure in PCOS patients, and should be always considered in PCOS CC resistant patients.

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