

# Polycystic Ovarian Syndrome in Adolescents: Metabolic Profile at Diagnosis, During and After Treatment with Oral Contraceptives

Arcari A, Gryngarten M, Ballerini MG, Freire A, Ropelato MG, Bergadá I, Escobar ME.

Centro de Investigaciones Endocrinológicas "Dr. César Bergadá" (CEDIE) CONICET – FEI – División de Endocrinología, Hospital de Niños "Ricardo Gutiérrez".

Gallo 1330, C1425EFD Buenos Aires, Argentina

hrp0082P2-D1-533

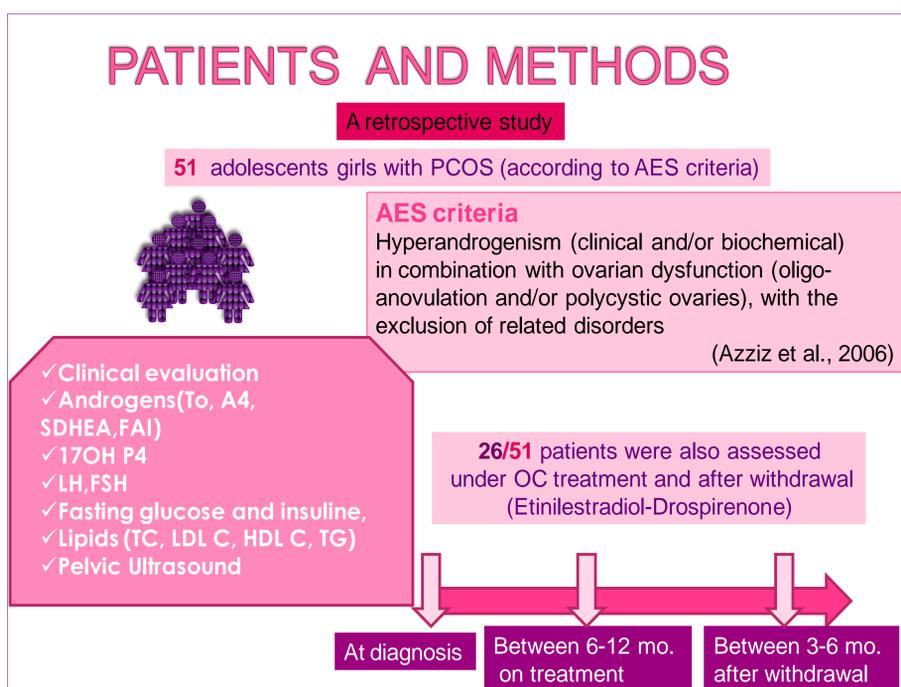
## BACKGROUND

- Obesity and unfavorable metabolic profile (insulin resistance and/or dyslipidemia) are frequently observed in polycystic ovarian syndrome (PCOS).
- Oral contraceptives (OC) are the first-line treatment of the syndrome for the improvement of hyperandrogenism and menstrual cycles.
- The long term effects of OC on insulin resistance and lipid profile in PCOS adolescents remain controversial.

## OBJECTIVE

- To evaluate clinical features and metabolic profile in PCOS adolescents, before, during and after oral contraceptive (OC) treatment.

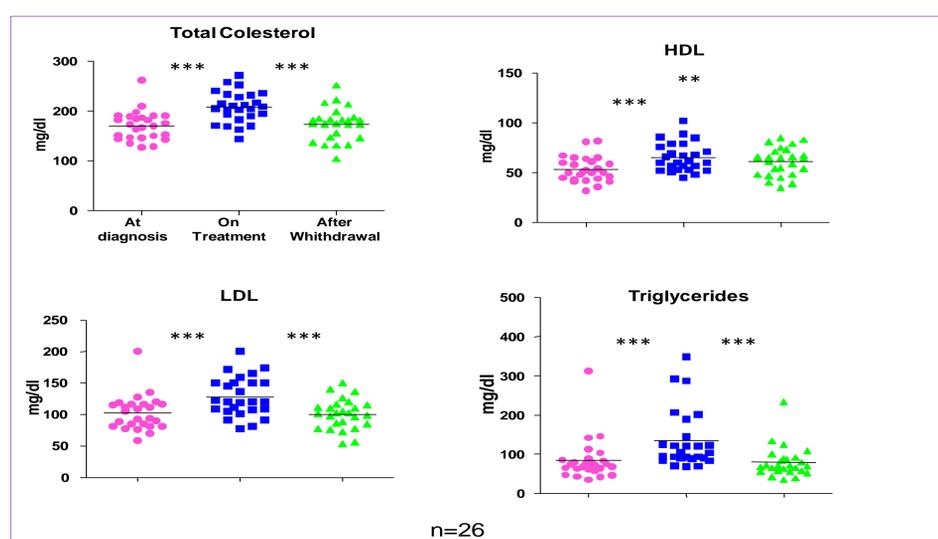
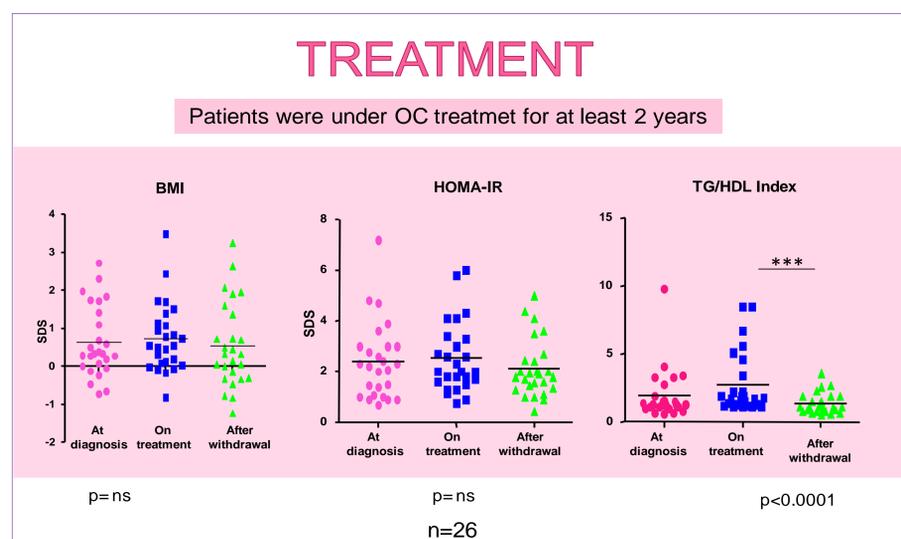
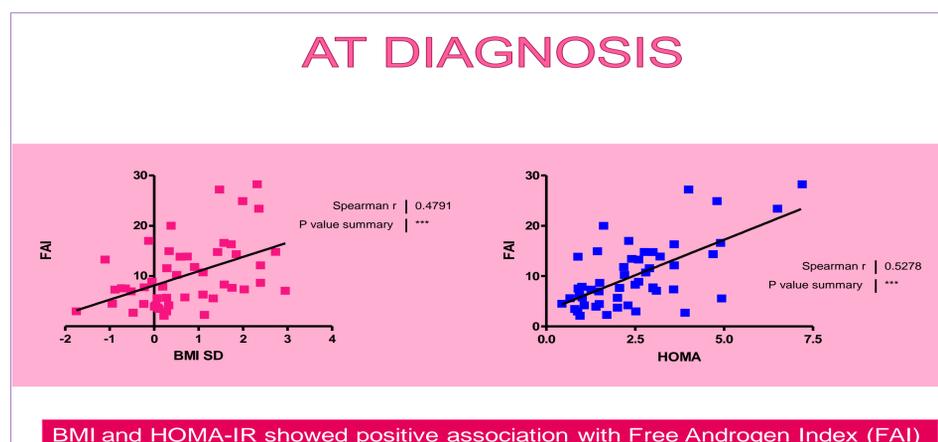
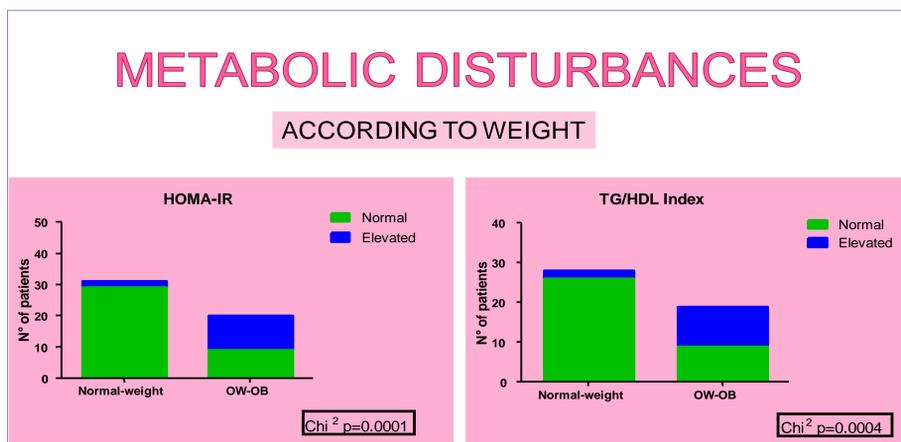
## RESULTS



### CLINICAL FEATURES

	CHRONOLOGICAL AGE (years)	MENARCHE (years)	GYNECOLOGICAL AGE (years)	BMI-SD
Mean±SD	16.0±1.8	11.8±2.9	4±2.0	0.7±1.1

WEIGHT	Normal Weight (NW)	60 %
	Overweight (OW)	26 %
	Obese (OB)	14 %
HIRSUTISM (Ferriman & Gallwey Score >8)		98%
ACNE		67%
ACANTHOSIS NIGRICANS		21.5%
MENSTRUAL DISORDERS		100%
	Oligoamenorrhea	59%
	Poly-oligomenorrhea	21%
	Primary amenorrhea	10%
	Secondary amenorrhea	10%
POLYCYSTIC OVARIAN MORPHOLOGY (Ovarian volumen >10cc by ultrasound)		33%
BIOCHEMICAL HYPERANDROGENISM		86%
	Only elevated To	19%
	Only elevated A4	18%
	Elevated To+A4	49%
ELEVATED HOMA-IR (>3)		31%
ELEVATED TG/HDL Index (>2)		23.5%



## CONCLUSIONS

- An elevated percentage of adolescent girls with PCOS have overweight or obesity.
- Insulin resistance and dyslipidemia at diagnosis were mainly associated with overweight or obesity.
- In our cohort OC treatment had no effect either on BMI or on insulin resistance.
- Even though total cholesterol, LDL cholesterol and triglyceride levels increased on OC treatment that unfavorable lipid profile improved after withdrawal.
- Lifestyle intervention is strongly recommended from the diagnosis of PCOS in adolescents to reduce the increased metabolic risk during adulthood.