



PREGNANCY OUTCOMES IN A COHORT OF PATIENTS WITH POLYCYSTIC OVARIAN SYNDROME (PCOS) AT THE UNIVERSITY HOSPITAL OF THE WEST INDIES (UHWI) BETWEEN 2012-2023

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INTRODUCTION

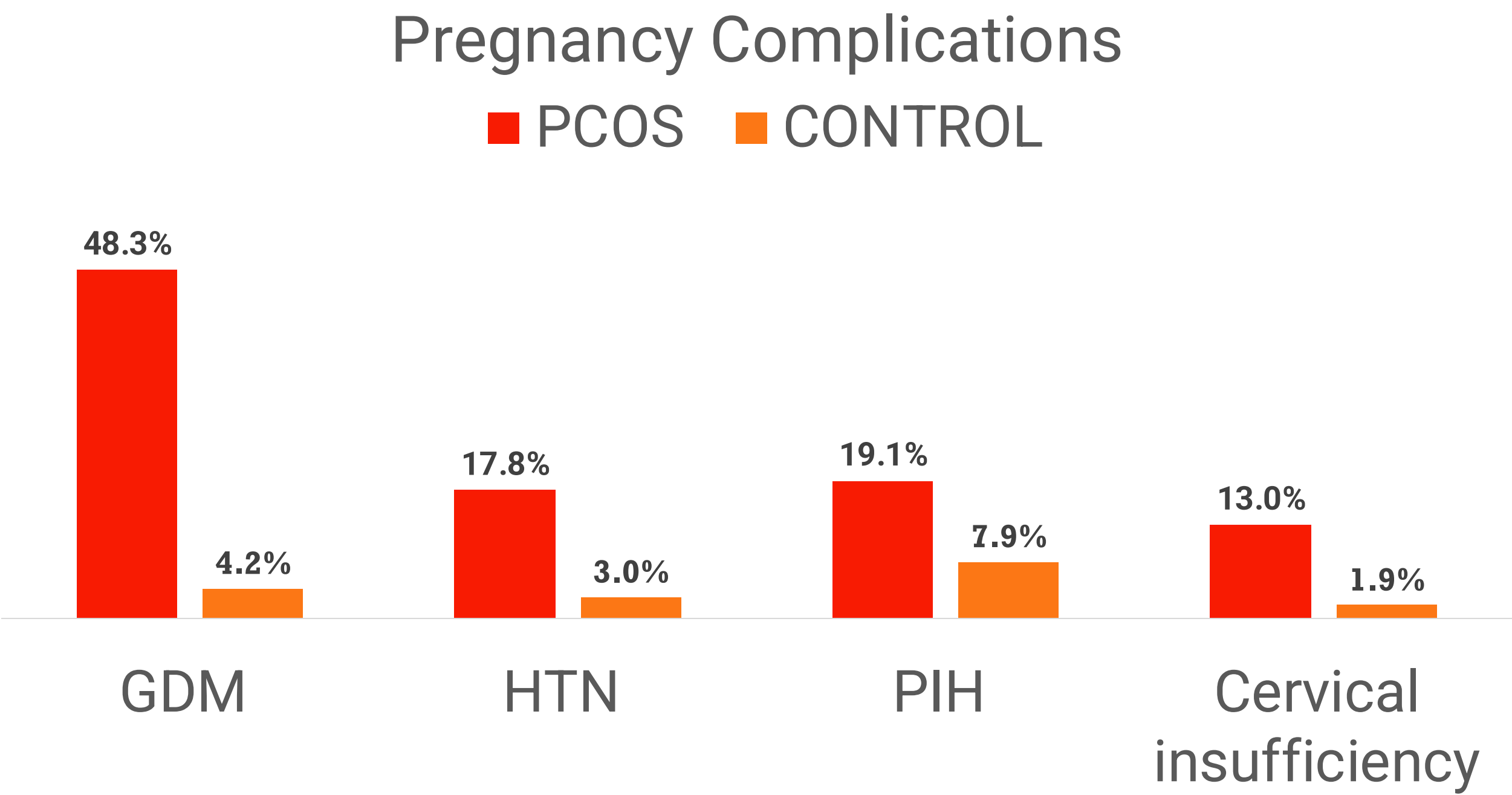
- PCOS is characterized by **hyperandrogenism, ovarian dysfunction and hyperinsulinemia with reproductive consequences**
- Most common endocrine disorder in women of reproductive age** with reported prevalence of **6-15%**¹
- Cardiovascular, endocrine and metabolic sequelae **increase the risk of adverse pregnancy and neonatal outcomes**
- Currently, there is a **gap in existing literature** on its prevalence and adverse pregnancy outcomes in a predominantly Afrocentric population

Aim of study: To determine the health outcomes of pregnant women with PCOS at the University Hospital of the West Indies (UHWI) between 2012-2023

METHODOLOGY

- Retrospective cohort study** of obstetric patients seen at the UHWI between January 1, 2012 - December 31, 2023.
- Cases were identified using documentation in the Labour Ward records and subsequent docket review. **Controls were age-matched and delivered within a week of the index cases.**
- Sample size = 226 (113 cases, 113 controls) [79 cases and 109 controls at time of preliminary analysis]**
- Women with multiple gestation, pre-existing diabetes, prior history of gestational diabetes (GDM) and age <18 or >45 were excluded
- Data on maternal and neonatal demographics, clinical course and pregnancy outcomes were collected.
- Descriptive, bivariate and multivariate analyses were done. **Statistical significance was set at p<0.05**

RESULTS

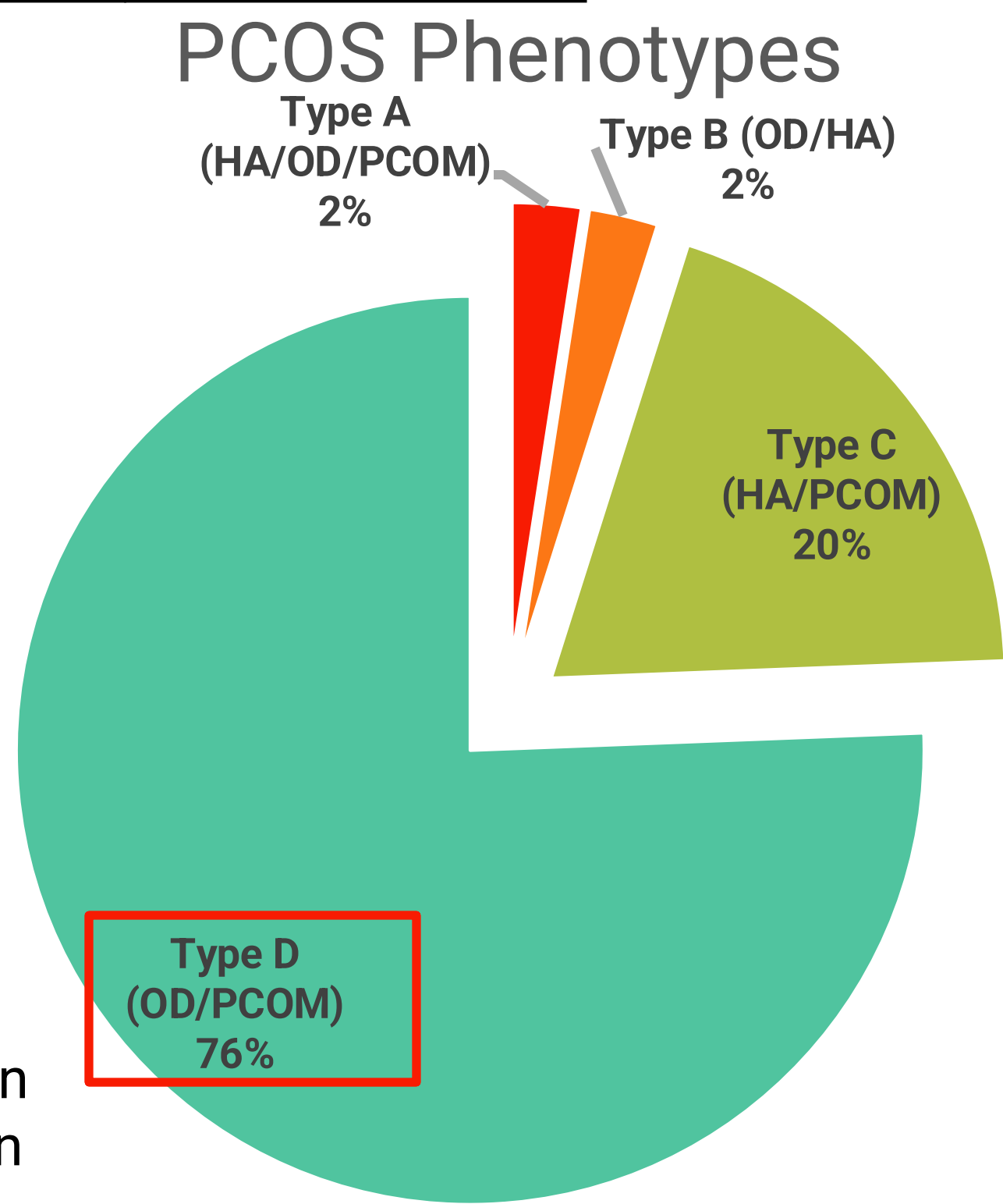


Characteristic	PCOS	Control	p value	OR (95% CI)	p value (adjusted)	aOR (95% CI)
Mean age	29.38	29.40	-	-	-	-
Mean BMI	31.99	25.97	<0.001	-	-	-
Any complication	39.7%	21.6%	0.008	2.4 (1.3-4.6)	-	-
GDM	48.3%	4.2%	<0.005	21.5 (2.6-180.7)	0.176	4.95 (0.49-50.1)
HTN	17.8%	3%	<0.001	5.7 (2.3-14.2)	<0.05	5.0 (1.0-25.3)
PIH	19.1%	7.9%	0.03	2.7 (1.1-7.0)	0.803	1.2 (0.31-4.6)
Cervical insufficiency	13%	1.9%	0.003	7.5 (1.6-35.5)	-	-

HTN – hypertension; PIH – pregnancy induced hypertension

- Pregnancy complications were more common in PCOS patients**
- There were no significant differences in neonatal outcomes between the groups.

Key:
HA – hyperandrogenism
OD – ovulatory dysfunction
PCOM – polycystic ovarian morphology



DISCUSSION

- Previous meta-analyses²⁻⁴ found that GDM was 3x more likely in women with PCOS. Similar findings were noted in our study with a 20x increased risk likely due to the ethnicity of our study population.
- A systematic review done in 2011³ found that PIH was 3-4x more likely in PCOS patients. Results were similar in our population where it was found to be 3x more likely.
- A recent meta-analysis published in May 2024⁵ identified a 5.3x increased risk of cervical insufficiency in patients with PCOS. This was similar to the findings of this study which identified a 7.5x increased risk.
- After adjusting for confounders, there was a significant association between PCOS and hypertension. However, there was no significant association between PCOS and GDM or PIH.**

CONCLUSION

- Adverse pregnancy outcomes were similar to those reported in existing literature. However, the relationship between PCOS and GDM as well as PCOS and PIH was confounded by obesity
- The association with **HTN** may have clinical implications (**prophylactic aspirin therapy**)
- The association with **cervical insufficiency** may also have clinical implications (**cervical surveillance**)
- The **type D phenotype** was most prevalent in our population suggesting that **anovulation, rather than hyperandrogenism, may be the predominant clinical feature.**

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