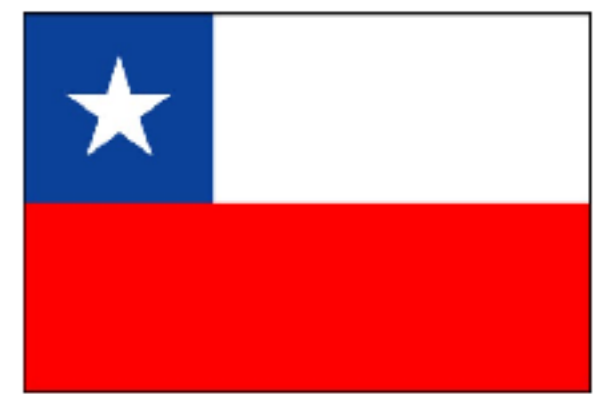


Clinical And Hormonal Profile In Mini-puberty Of Daughters Born After Pregnancies With Diabetes: Preliminary Report

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DISCLOSURE:
Nothing to disclose

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I. BACKGROUND

Maternal diabetes is a pathologic state that increases the incidence of complications in both the mother and the fetus.¹

Patients with diabetes mellitus (DM) may exhibit reproductive abnormalities, including PCOS and hypogonadotropic hypogonadism.

Diabetes during pregnancy is an endocrine disruptor and studies performed in animal models have shown abnormalities in gonadal function in the offspring², but it is unknown whether pre-gestational (PGDM) and gestational diabetes (GDM) may affect ovarian function in the offspring of women with diabetes mellitus in the short or long term

II. OBJECTIVES

To evaluate anthropometric profile and serum concentration of testosterone, SHBG and anti-müllerian hormone (AMH), in healthy infant girls born to women who had diabetes during pregnancy (PGDM or GDM) at the time of mini-puberty.

III. SUBJECTS AND METHODS

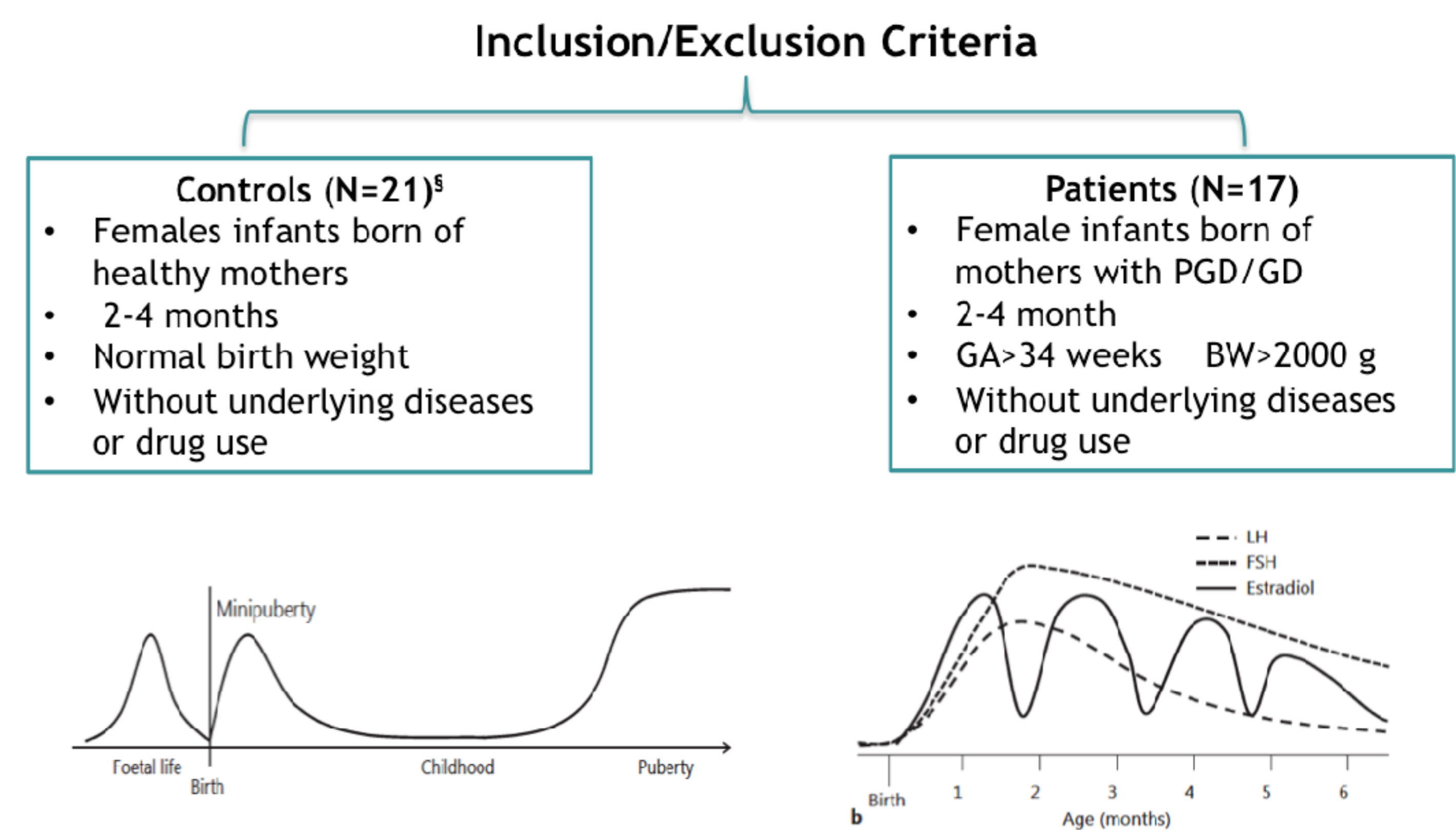
Healthy girls born product of a normal pregnancy in non-diabetic mothers (N=21)[§] and healthy daughters of mothers who had diabetes during pregnancy (DM, N=17) were studied.

Clinical evaluation:

- Perinatal and medical history
- Physical examination/ anthropometry

Laboratory assessment:

- Blood sample was obtained
- Testosterone, SHBG and AMH were determined by specific assays



[§] The control group is an historic group that was previously studied by *Sir-Petermann T et al.*³

IV. RESULTS

Table 1 : Clinical characteristics of daughters of DM mothers and daughters of Non-DM mothers

	Daughters of DM Mothers (DG=9 y DPG=8) (N=17)		Daughters of Non-DM Mothers (N=21)	
	Mean	SD	Mean	SD
Age (months)	3.24	0.53**	2.4	0.6
Height (cm)	60	2.5**	58.2	2
Weight (SD)	0.53	0.76	0.37	0.11

**p<0.05

Table 2 : Biochemical characteristics of daughters of DM mothers and daughters of Non-DM mothers

	Daughters of DM Mothers (N=17)		Daughters of Non-DM Mothers (N=21)	
	Mean	SD	Mean	SD
Testosterone (ng/mL)	0.17	0.29	0.3	0.2
SHBG (nM/L)	251.15	76***	95.8	42.3
AMH (pM/L)	39.3	32.8***	9.16	8.6

***p<0.0001

CONCLUSION

- This is the first report that evaluates mini-puberty in offspring of DM women.
- Girls born in pregnancies with diabetes have higher AMH and SHBG serum levels.
- Elevated AMH levels may suggest an altered follicular development during early infancy in offspring of DM women.

References / Bibliography:

1. Pridjian G. *Obstet Gynecol Clin N Am* 37 (2010) 255–267
2. Khaksa Z. *World J. Zool.* 8 (1): 24-29, 2013
3. Sir-Petermann T et al. *J Clin Endocrinol Metab* 2006; 91:3105-9

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