Chapter 7
Long Range Outcome of Prenatal Treatment

Maria I. New and Alan A. Parsa

Preliminary medical results are presented in Figs. 7.1, 7.2, and 7.3. Reported fractures in those prenatally treated were less frequent than those who reported fractures. The data do not show any apparent difference in the rate of fractures between those prenatally treated with dexamethasone and those not prenatally treated. With respect to obesity there is no evidence that those who were treated with dexamethasone prenatally had a higher BMI than those not treated. Hypertension was infrequent and the blood pressure in one patient who was treated was no different from the other patient who was not treated. There were no patients with diabetes observed in the long-term follow-up.

PRELIMINARY MEDICAL RESULTS

Bone fractures

	Reported fractures	No reported fractures	Total
Dex–treated	12 (37.5%)	20 (62.5%)	32
Not Dex–treated	13 (26.0%)	37 (74.0%)	50
Total	25 (30.5%)	57 (69.5%)	82

Fig. 7.1 The data do not show any apparent difference in the rate of fracture between those prenatally treated with dexamethasone and those not prenatally treated

M.I. New (✉)
Adrenal Steroid Disorders Program, Division of Pediatric Endocrinology,
Department of Pediatrics, Mount Sinai School of Medicine, New York, NY, USA
e-mail: maria.new@mssm.edu

M.I. New, J.L. Simpson (eds.), *Hormonal and Genetic Basis of Sexual Differentiation Disorders and Hot Topics in Endocrinology*, Advances in Experimental Medicine and Biology 707, DOI 10.1007/978-1-4419-8002-1_7,

Obesity

	Dex treated ($n=24$)	No prenatal dex ($n=29$)
Normal (BMI 18–25)	17 (70.8%)	17 (59.0%)
Overweight (BMI 25–30)	4 (16.7%)	9 (31.0%)
Obese (BMI > 30)	2 (8.3%)	3 (10.3%)
Underweight (BMI < 18)	1 (4.2%)	0 (0.0%)
Total	24	29

Fig. 7.2 Prenatal Dex treatment does not increase the risk of overweight or obesity

Fig. 7.3 Prenatal dexamethasone does not increase the risk of hypertension

Hypertension

	Dex treated ($n=18$)	No prenatal Dex ($n=28$)
Hypotensive (<90/<60)	0	0
Normal (90–139/60–89)	17	27
Hypertensive (>140/>90)	1	1

Preliminary psychoendocrine outcome including cognition, gender, behavior, and performance revealed a marginal difference between dexamethasone exposed versus dexamethasone unexposed affected females. Feminine hobby preference and female gender behavior were increased in the dexamethasone exposed group. There was no psychoendocrine difference in dexamethasone exposed or unexposed males whether affected or unaffected with CAH (Table 7.1). Based on the Behavior Problem Scale no significant changes between dexamethasone exposed and dexamethasone unexposed affected males or females were seen except that the dexamethasone unexposed patients had significantly higher attention problems ($P < 0.02$) and were marginally more aggressive ($P < 0.095$). There were no differences in the education outcome in those treated or untreated.

Table 7.1 Study enrollment (USA and France)

	No dex				Partial dex				Full dex				
	M		F		M		F		M		F		
	Fr	A	Fr	A	Fr	A	Fr	A	Fr	A	Fr	A	Total
SW	10	8	17	7	4	3	0	1	1	0	6	3	60
	18		24		7		1		1		9		
SV	2	1	0	3	1	1	0	0	0	0	1	0	9
	3		3		2		0		0		1		
NC	0	1	0	1	0	1	0	0	0	0	0	0	3
	1		1		1		0		0		0		
No CAH	10	6	8	4	7	8	9	9	0	2	0	1	64
	16		12		15		18		2		1		
Total	38		40		25		19		3		11		136

FR - France; A - America.

Summary: These preliminary data show no obvious detrimental effects in patients treated with low-dose dexamethasone prenatally.