Pregnancy in Women with Non-classic Congenital Adrenal Hyperplasia: Time to Conceive and Outcome

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Background

- Non-classic Congenital Adrenal Hyperplasia (NC21OHD) is very common (1:400) in Ashkenazi Jews
- Genotype: homozygous or compound heterozygous
- Therapy with small dose of glucocorticoids (GC) to symptomatic subjects
- Others reported increased rate of miscarriages in non treated NC21OHD
- Time to conceive was not compared between treated and untreated females

Aims

- To assess time to conceive and pregnancy outcome according to glucocorticoid (GC) treatment in women with NC21OHD
- To assess the impact of age at diagnosis, genotype, androgens levels, Polycystic Ovary (PCO) and Body Mass Index (BMI) on pregnancy outcome

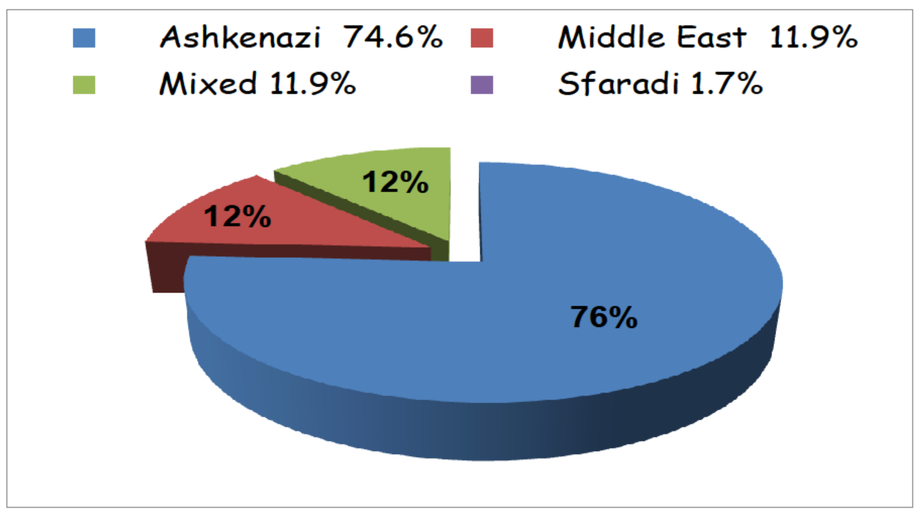
Methods

- Retrospective observational study in a tertiary medical center
- Data extraction from files of NC21OHD women who wished pregnancy
- The study was approved by the local ethics committee

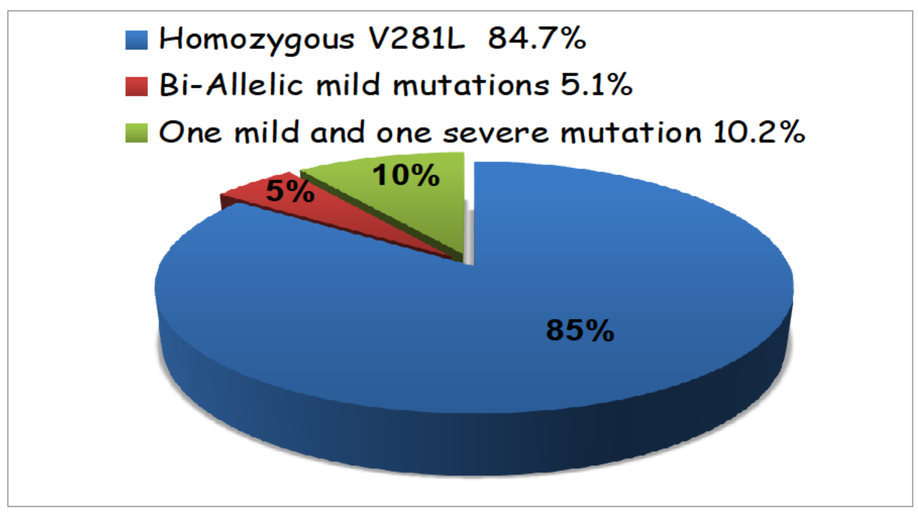
Demographic Data

- Fifty nine women
- Age at study [Median (range)] – 36 years (21-59)
- Age at diagnosis [Median (range)] – 20 years (0.1-38)
- Age (mean ±sd) at pubarche- 9.6 ± 2.8 yr was younger than age at gonadarche, 11.0 ± 2.0 yr (p<0.001)
- PCO prevalence 28.6%

Ethnic origin

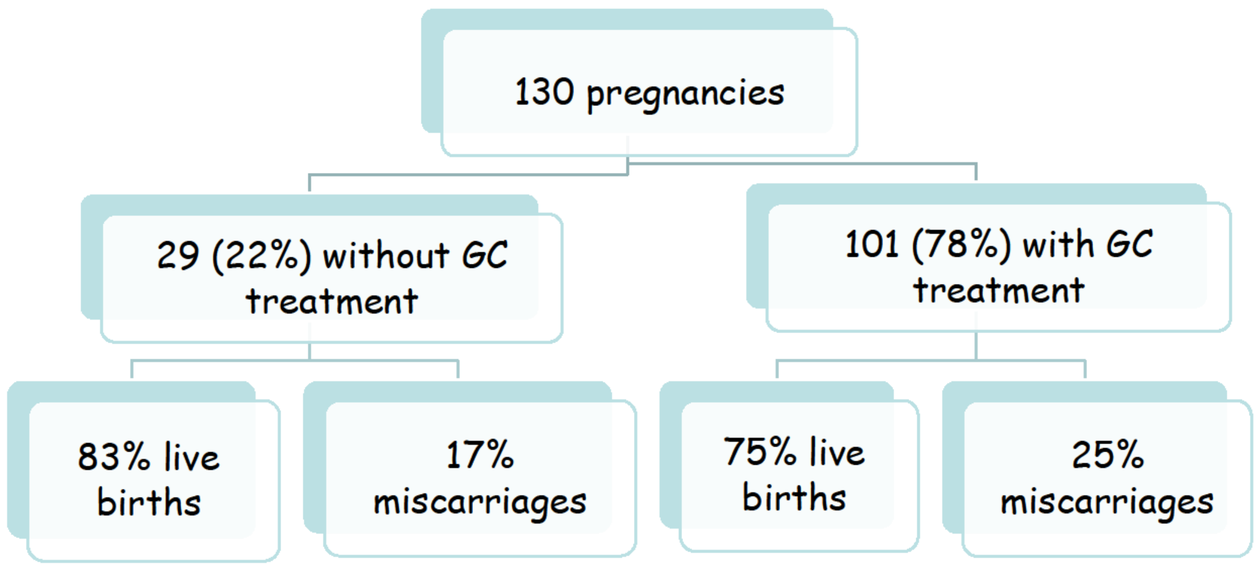


Genotype



Results

Outcomes of Pregnancies by GC Therapy



Pregnancy outcome	Pregnancies without GC treatment (n=29)	Pregnancies with GC treatment (n=101)	P
Time to conceive (months)	15.1 ± 37.7	6.9 ± 8.5	0.01
Outcome			
Miscarriages	5 (17.2%)	25 (24%)	NS
Live births	24 (82.8%)	76 (76%)	NS
Birth weight (Kg)	3.2 ± 0.5	3.0 ± 0.5	0.03
Week delivery	38.7 ± 2.7	38.7 ± 1.7	1.0

- Hydrocortisone equivalent (HC) dose: First trimester 7.2 ± 3.4 mg/m^2 > second and third trimester (6.5 ± 3.0 and 6.7 ± 3.7 mg/m^2, respectively, p<0.001)
- Treatment was stopped in 14% of pregnancies due to normal androgen levels for pregnancy

Pregnancy Outcome By PCO

Outcome	PCO	Non PCO	P
Live birth	20 (57.1%)	59 (76.6%)	0.054
Miscarriage	15 (42.9%)	18 (23.4%)	

- Treated women with PCO had significant longer time to conceive compared to women without PCO (4.1±6.1 vs. 8.7±7.6 months, p=0.001)
- There was no impact of age at diagnosis, BMI, 17OHP and androgen levels on time to conceive and pregnancy outcome
- 24% of the newborns had NC21OHD
- 1 % of the newborns had classic CAH

Discussion

- GC therapy significantly shortened the time to conceive in females with NC21OHD
- No significant difference in miscarriages rate among treated and untreated pregnancies
- The incidence of NC21OHD was five fold and of classical CAH two fold higher than excepted

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