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The relationship between the Glu298Asp and intron 4 polymorphisms of endothelial nitric oxide synthase in an Hispanic population with preeclampsia.
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Endothelial nitric oxide synthase (eNOS) enzymatically converts L-arginine to L-citrulline within endothelial cells. This reaction results in the release of nitric oxide (NO). NO mediates vascular smooth muscle relaxation and has been proposed to be an important regulator of blood pressure homoeostasis during pregnancy. Our laboratory previously demonstrated an association between preeclampsia and a polymorphism (27 bp repeat) within intron 4 (I-4) of the eNOS gene (NOS3). We sought to establish whether a missense mutation (Glu298Asp) within exon 7 (E-7) of NOS3 co-segregates with the I-4 polymorphism. We also studied the combined effect of the NOS3 I-4 polymorphism and NOS3 E-7 mutation on clinical phenotype. ***Methods***: Genomic DNA was extracted from blood of 54 women with preeclampsia (PET) and 37 controls. Genotyping was performed by PCR (I-4) and PCR-RFLP analysis (E-7). Women with at least one NOS3 I-4 copy allele were designated A and those with the more common 5 copy were scored B. Women with at least one E-7 mutation were designated M and those with no mutation were designated N. All products were scored using a 1.5% agarose gel. ***Results***: One of 5 women homozygous for the I-4 A-allele also had an E-7 mutation. None of the four women homozygous for the E-7 mutation had the I-4 A-allele. All women homozygous for the E-7 mutation were identified within the control group. Among women with PET, those scored as B/M had significantly higher blood urea nitrogen (18.6 mg/dl) when compared to those scored as B/N (9.8 mg/dl), A/N (10.6 mg/dl), and A/M (10.5 mg/dl). Women with a B/M score also had a significantly greater urine dip-stick protein value (median 3 vs. 2.5) and higher weight on admission (201 vs. 164 lbs) than women scored as B/N. ***Conclusion***: The I-4 polymorphism and the E-7 mutation in NOS3 do not appear to co-segregate. The E-7 mutation of NOS3 may have specific influences on the phenotypic features observed among women with preeclampsia.

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Outcomes of a prenatal cytogenetic screening program in an urban state university medical center.
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Prenatal screening has been adopted universally to prevent or at least reduce the number of children born with severe congenital anomalies by identifying women at an increased risk over the general population. Specifically, prenatal screening for chromosomal disorders includes maternal serum markers (MSM), maternal age and history (MA) and ultrasonography (US). Upon identification of increased risk, women are offered counseling and given the option of having an invasive diagnostic procedure.
OBJECTIVES: To evaluate the number of invasive diagnostic procedures performed after non-directive genetic counseling for a positive MSM, MA or US.
MATERIAL AND METHODS: We studied 2525 pregnant women in 1995, 1996, 1997 and Jan 1 to Oct 31 1999. 53.4 % of patients were Hispanic, 30.4% African American, 12.1% Caucasian and 3.9% of other ethnic backgrounds. 1866 patients (74%) were on Medicaid or uninsured while 659 patients (26%) had their own insurance.
RESULTS: Of these 2525 women, 1695 (67%) were referred due to positive prenatal screening. The remaining 830 patients were referred for other indications: teratogenic exposure, family history, previous pregnancy loss, consanguinity, etc. The table shows the number of patients referred for MSM (37%), MA (51%) and US (12%) as well as the percentage accepting further invasive prenatal testing (%TEST).

	# MSM	(%TEST)	#MA	(%TEST)	#US	(%TEST)
1995	120	(30%)	282	(38%)	62	(39%)
1996	187	(36%)	174	(40%)	36	(42%)
1997	190	(29%)	214	(36%)	61	(50%)
1999	129	(39%)	196	(34%)	44	(59%)
TOTAL	**626**	**(33.5%)**	**866**	**(37%)**	**203**	**(47.5%)**

CONCLUSIONS: Although the success of counseling is based solely on whether patients are effectively informed of their diagnostic and therapeutic options, our screening outcomes strongly suggest that community and institutional factors are responsible for the relatively low participation in prenatal diagnostic testing. Primary care providers should offer information on the objectives of prenatal screening, as well as the nature of the invasive procedures for diagnosis and the potential consequences of having a child with special needs. Providing accurate information prior to prenatal screening and referral could potentially decrease the number of referrals of patients who are truly uninterested in the objectives of prenatal screening and diagnosis.

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Prominent amnion-chorion separation between 13 and 15 weeks' gestation is associated with increased risk for fetal chromosome abnormalities.
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The past decade has witnessed the expansion of ultrasound technology into prenatal genetic screening with the application of ultrasound for fetal aneuploidy risk assessment using nuchal translucency measurement. It is well accepted that prominent separation of the amnion and chorion membranes is a commonly observed finding in first trimester pregnancies. However, recent work and experience have suggested that such separation may be associated with an increased risk of chromosome abnormality when found in the late first and second trimesters. We thus evaluated our most recent (1997 – 1999) prenatal diagnostic cases from 13.0 to 14.9 weeks' gestation, inclusive. Of the 247 cases, 14 cases (5.7%) were characterized by an amnion-chorion separation (at any given point and not necessarily uniform) of 15 mm or greater. The measurement of amnion-chorion separation was achieved by averaging 3 separate views of the membranes. Of these 14 pregnancies, 6 (42.9%) were characterized by abnormal fetal complements: 3 cases of trisomy 21, 2 cases of trisomy 18 and a single case of 45,X. Of note is that all but 2 of the cases of trisomy 21 demonstrated concomitant ultrasound-detected fetal structural defects at the time of ultrasound examination.
Conclusions: Our findings from this preliminary study demonstrate that prominent amnion-chorion separation at or after the 13th gestational week may be associated with an increased risk for fetal chromosome abnormalities. Further work is needed to determine whether this is an independent marker for fetal chromosome abnormalities and whether such findings are reproducible at other centers.

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Withdrawn