findings suggest an immunologic basis for up to 20% of cases of fetal growth restriction.

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109 Predictors of periodontal disease in pregnant women

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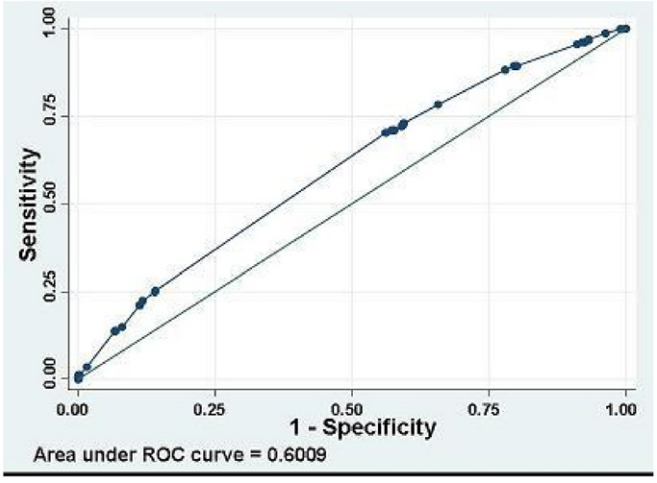
OBJECTIVE: To identify risk factors for periodontal disease among pregnant women.

STUDY DESIGN: This study is a secondary analysis of subjects enrolled into a multicenter RCT of periodontal disease (PD) in pregnancy. A group of women without PD were also enrolled and followed. Periodontal disease was diagnosed with standard criteria by trained dental hygienists. A detailed interview gathering information on patient demographic, medical, social, and obstetrical history was performed at the time of enrollment. Analysis of risk factors for PD was done using standard bivariate statistics and multivariable logistic regression. A multivariable prediction model and a ROC curve were created.

RESULTS: Of 3079 women screened, 1464 women (47.6%) were identified with PD. Older women were more likely to have PD ($p<0.001$) as were black women (aOR 1.84, CI 1.38-2.45) and women with a history of trichomoniasis (aOR 1.62, CI 1.18-2.21). Antibiotic use since LMP was protective (aOR 0.68, CI 0.52-0.90). A statistically insignificant trend was seen for Medicaid insurance status (aOR 1.37, CI 0.98-1.93) and history of syphilis (aOR 7.46, CI 0.95-58.5). Factors not related to PD included cigarette use, drug use, diabetes, other STIs, and oral health habits. Although factors were associated with PD, the multivariable prediction rule was poor, as shown in the ROC curve (Figure).



ROC Curve

CONCLUSION: Several factors are associated with periodontal disease, however they have poor discriminatory ability.

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110 The impact of fetal sex on pregnancy outcome in twin pregnancies – who is to blame?

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OBJECTIVE: To assess the association between fetal sex and pregnancy outcome in dichorionic twin pregnancies and to determine the effect of male and female fetuses on their opposite-sex co-twin.

STUDY DESIGN: Retrospective study of all dichorionic twin pregnancies at a tertiary hospital from 1995 to 2006. Pregnancies were classified into three groups according to fetal sex (i.e., female-female [FF], male-female [MF], and male-male [MM]), and pregnancy outcome was compared for the three groups. Neonatal outcome of female infants from FF pregnancies was compared with that of female infants from MF pregnancies. Similarly, the outcome of male infants from MF pregnancies was compared with that of male infants from MM pregnancies. Multivariate logistic regression and Cox proportional hazards model were used to adjust the risk of prematurity and adverse neonatal outcome for potential confounders.

RESULTS: 1) 2,704 twin pregnancies were included in the study, of which there were 436 (16.1%) FF pregnancies, 1878 (69.5%) MF pregnancies, and 390 (14.4%) MM pregnancies. 2) The risk of preterm delivery at less then 31 and 28 weeks was highest in the MM group (OR=1.7, 95%-CI 1.2-2.6 and OR=2.3, 95%-CI 1.3-4.2, respectively) and intermediate in the MF group (OR=1.4, 95%-CI 1.1-1.9 and OR=1.8, 95%-CI 1.2-3.0, respectively) using the FF group as the reference group, and was related to a higher rate of spontaneous preterm delivery. 3) Male neonates in MM twin pairs were characterized by a lower mean birth weight and a lower growth rate when compared to male neonates in MF pairs. 4) Female neonates from MF pregnancies had a similar rate of respiratory neurologic morbidity to that of male infants and significantly higher than that of female neonates from FF pregnancies. 5) Male neonates from MM pregnancies had a higher risk for convulsions compared to males from unlike-sex twin pregnancies.

CONCLUSION: Our results clearly indicate that there is an effect of male and female fetuses on their opposite-sex co-twins. Analysis of neonatal outcome for preterm twin infants identifies a male-offending factor.

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111 Gender pair in twin gestations and the risk of prematurity and low birthweight

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OBJECTIVE: To evaluate the risk of preterm delivery and low birthweight among different gender pairs in twin gestations.

STUDY DESIGN: A secondary analysis was performed using the Matched Multiple Birth File including data from 1995 to 2000. This data includes information on sets of twin, triplet, and quadruplet births in the United States. Data is processed per state and submitted to the National Center for Health and Statistics and is later published. The data is coded according to uniform coding specifications, have passed rigid quality control standards, have been edited and reviewed and are the basis for official U. S. birth statistics. Data was stratified into three groups of gender pairs: Female/Female (FF), Male/Female (MF), and Male/Male (MM). Primary outcomes were preterm delivery (PTD) rates <37 weeks, <32 weeks, and <28 weeks and rates of low birthweight (LBW <2500gm) and very low birthweight (VLBW <1500gm) infants. Maternal demographics, pregnancy complications, and neonatal outcomes were also analyzed.

RESULTS: A total of 651,090 twin gestations occurred between 1995 and 200 in the U. S. The gender pairs were divided as follows: FF 33.1%, MF 33.2%, MM 33.7%. Table 1 depicts the primary outcomes of the study. After logistic regression analysis, both MF and MM pairs were noted to be independent risk factors for PTD and LBW, while the FF pairs were not.

CONCLUSION: When the male gender is present in any pair combination, it appears to increase the risk for preterm delivery and low birthweight in twin gestations. These pregnancies may warrant closer surveillance.