Abstract

OBJECTIVES: 1) To determine the association between maternal characteristics and the microbial flora of the vagina in pregnancies with high risk of prematurity; and, 2) To determine the association between the microbial flora of the vagina and the maternal and perinatal outcome in pregnancies with high risk of prematurity. DESIGN: Case-control study, between January 1994 and December 1995. MATERIAL AND METHODS: Case group comprised 238 singleton-pregnant women who were admitted because of preterm premature contractions, preterm labor, increased vaginal fluid, acute pyelonephritis and arterial hypertension. All cases underwent a wet preparation to establish the microbial flora. The control group included 3,850 singleton pregnant women who delivered a term neonate at the same institution. Case group was further divided into women with bacterial vaginitis (n=136), bacterial vaginosis (BV, n=57) and trichomonas vaginalis (TV, n=45). RESULTS: Women with TV and BV had a single sexual partner. Case group had increased risk of maternal malnutrition, low maternal weight, a diabetic/hypertensive direct relative, prediabetes, chronic anemia, threatened abortion, uterine scar, puerperal fever, and endometritis. Case-group neonates had increased risk of hyperbilirubinemia, neonatal sepsis, prematurity, respiratory distress syndrome, neonatal morbidity, small and large-for-gestational age infant. CONCLUSIONS: Both inheritance and environment determine nutritional status, vaginal microbial flora and the inflammatory response of the maternal-fetal unit. The maternal-fetal response to various factors would establish the pathogenic pathway for preterm labor syndrome, prematurity and neonatal morbidity.

Keywords

Pregnancy; prenatal care; infant, premature; vaginosis bacterial; nutritional status.