

MATERNAL AND NEONATAL SCREENING FOR GROUP B STREPTOCOCCI BY *SCPB* GENE BASED PCR: A PRELIMINARY STUDY

*Sahar MY Elbaradie, Manal Mahmoud, Mona Farid

Abstract

Objective: To detect the magnitude of group B streptococcal (GBS) colonization and disease among a sample of pregnant women and their infants in Egypt. **Study**

Design: Prospective observational study.

Participants: The study included 90 pregnant females, 30, 37 weeks of gestational age, attending the antenatal outpatient clinic at AlFayom University Hospital between September 2006 and June 2007. All participants were screened with vaginorectal swabs by a conventional GBS PCR assay. Participants were grouped into group A (GBS present, 17 patients) and group B (GBS absent, 73 patients). Details with regard to labor and delivery were recorded and placental pathology was examined to detect histological chorioamnionitis. Ninety-five infant data were also recorded. All neonates of group A (17 out of 90 with known positive maternal GBS) underwent collection of simultaneous specimens from surface sites for PCR before their first bath and within four hours of birth.

Results: GBS carriage rate in the study sample was 17,8%. Chorioamnionitis confirmed in three patients by placental pathology (one was in group A and two in group B) was statistically not significant. Twenty-two women had rupture of membranes (<12 hours) before delivery (four from group A and 18 from group B) that was not statistically significant. There were three infants out of 17 in group A who had GBS colonized at one or more sites by PCR which was statistically significant. However, only one infant was admitted to neonatal intensive care unit (NICU) that was not statistically significant.

Conclusion: Maternal GBS carriage is associated with a significant increase in neonatal infection rate but is not associated with an increase in neonatal intensive care admission. An accurate evaluation of colonization rate (using a larger sample) is desired to evaluate neonatal invasive disease and determine the cost effectiveness of PCR to select an appropriate preventive strategy in Egypt.

Key words: *Chorioamnionitis, group B streptococcal, neonatal infection, PCR, premature rupture of membranes*