

# MATERNAL TO CHILD GROUP B *STREPTOCOCCUS* TRANSMISSION RATE AT THAMMASAT UNIVERSITY HOSPITAL, THAILAND

Wanwarang Hiriote<sup>1</sup>, Siripen Tor-Udom<sup>1</sup> and Pharuhat Tor-Udom<sup>2</sup>

<sup>1</sup>Department of Preclinical Sciences, Faculty of Medicine, Thammasat University

<sup>2</sup>Department of Clinical Sciences, Obstetrics and Gynecology, Faculty of Medicine, Thammasat University, Pathum Thani, Thailand

**Abstract.** Group B Streptococcus (GBS) or *Streptococcus agalactiae* is a major cause of pneumonia and sepsis in newborns. In Thailand, no studies have been done on GBS transmission rate from mothers to newborns during delivery. In this study, we determined the prevalence of maternal GBS infection, its transmission rate and antibiotic susceptibility profiles. A total of 421 vaginal/rectal swabs were collected from 421 pregnant women during labor and umbilical cord/ear canal/nasal swab specimens taken from 421 newborns. All specimens were cultured for GBS and antibiotic susceptibility testing was performed using the Kirby-Bauer disk diffusion method. The prevalence of maternal GBS infection was 15.0% and the transmission rate of GBS was 31.8%. For the cases of GBS transmission, 95% delivered by normal vaginal delivery and 5% delivered by cesarean section. The transmission rate among GBS positive women who had spontaneous rupture of the amniotic sac was 43.8% and among women who had artificial rupture was 17.2% ( $p < 0.05$ ). All GBS isolates among the women in this study were susceptible to penicillin, ampicillin, vancomycin, cefotaxime, ceftriaxone and linezolid, 87% were susceptible to clindamycin, 86% to erythromycin and 6% to tetracycline. The prevalence of maternal GBS infection and vertical transmission rate were high in our study. Routine screening for GBS at 35-37 weeks gestation and provision of antibiotic prophylaxis to those who are positive is warranted in this study population.

**Keywords:** Group B *Streptococcus*, prevalence, vertical transmission rate, drug susceptibility

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Correspondence: Wanwarang Hiriote, Department of Preclinical Sciences, Faculty of Medicine, Thammasat University, 95 Paholyotin Road, Khlong Luang, Pathum Thani 12120, Thailand.  
Tel: +66 (0) 2926 9710  
E-mail: hiriote@gmail.com