To the Editor

Group B streptococcus (GBS, *Streptococcus agalactiae*) can be transferred during delivery to neonates from mothers who are colonized with GBS in the genital tract [1, 2]. GBS can cause sepsis and meningitis in newborns. Despite substantial progress in prevention of perinatal GBS disease since the 1990s, GBS remains the leading cause of early-onset neonatal sepsis [2]. Therefore, the studies concerning the GBS colonization rates among pregnant women are important because GBS colonizes the vaginal and rectal areas of women asymptomatically. Recently, some authors have indicated a high maternal GBS colonization rates in women with higher parity and/or body mass index (BMI) in various regions of the world [3-6]. In addition, maternal obesity and overweight have been observed to be risk factors associated with increased risk of neonatal early-onset group B streptococcal (EOGBS) disease [6]. The mechanisms leading to the associations remain unclear except the possibility of maternal immune status [7]. Therefore, we examined the prevalence and associated factors of GBS colonization at our institute which is one of the main perinatal centers in Tokyo, Japan.

The protocol for this analysis was approved by the Ethics Committee of the Japanese Red Cross Katsushika Maternity Hospital. In our institute, oral informed consent for analysis from a retrospective database was obtained from each subject during the hospital visit.

We reviewed the obstetric records of all pregnant women who delivered beyond 35 weeks’ gestation at Japanese Red Cross Katsushika Maternity Hospital from January 2006 through December 2018. In our institute, a specimen for GBS cultivation was obtained from the introitus of both the vagina and the anus at a gestational term of 35 - 37 weeks according to the Guidelines for Obstetrical Practice in Japan 2017 [8]. Demographic information and the characteristics of women were extracted from patient charts. In this study, we examined maternal age, multiple pregnancy, parity, BMI and diabetes (any type) as the potential associated factors for GBS colonization.

Data are expressed as the number (%). SPSS Statistics software version 20 (IBM Corp., Armonk, NY, USA) was used for statistical analyses. The \( \chi^2 \) or Fisher’s exact test was used for categorical variables. Odds ratios (ORs) and 95% confidence intervals (CIs) were also calculated. Differences with \( P < 0.05 \) were considered significant.

During the study period, there were 5,726 women who delivered beyond 35 weeks’ gestation. Of these, an intrapartum GBS screening was performed in 5,626 Japanese women at 35 - 37 weeks of gestation (98.3%). Table 1 shows the association between patient variables and GBS colonization analyzed by univariable analyses. As shown in Table 1, 17.4% of the Japanese women (979/5,626) were colonized with GBS; however, the association between parity or BMI and colonization rates did not reach statistical significance. We could not find any factors associated with the prevalence of GBS colonization in the women managed at our institute. The factors associated with the prevalence of GBS colonization may be also affected by the difference in population groups. A large study in wide areas of the world is needed.

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Not applicable.

Financial Disclosure

Not applicable.

Conflict of Interest

None to declare. Completed disclosure of interests form available to view online as supporting information.

Informed Consent

Not applicable.

Author Contributions

TS collected the data, and wrote and reviewed the manuscript.

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SS designed the report, analyzed the data, wrote and reviewed the manuscript, and approved the final draft.

References


