HOW MANY WOMEN CAN BENEFIT FROM A FULL INTRAPARTUM ANTIMICROBIAL PROPHYLAXIS FOR PREVENTION OF PERINATAL GROUP B STREPTOCOCCAL DISEASE?

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ABSTRACT

Background: In Belgium as in many Western countries, GBS is still the leading cause of severe perinatal infections. Current guidelines for prevention recommend intrapartum antimicrobial prophylaxis (IAP) administered promptly before delivery to pregnant women colonized with GBS. The risk of vertical GBS transmission to the newborn decreases as the duration of prophylaxis increases. The considered threshold for prophylaxis adequacy is the first dose administered at least 4 hours before delivery.

Objective: To evaluate the proportion of pregnant women who could benefit from an adequate IAP for the prevention of GBS perinatal infections.

Methods: Between June and October 2003, we recorded in two hospitals the elapsed time between admission for labor and delivery. We assumed 5% of women had actually delivered before receiving adequate IAP. This was considered to be a threshold of adequate GBS prophylaxis given by CDC criteria. The elapsed time to delivery was recorded for women who delivered in two different sites of the university department of obstetrics in Liége, Belgium and 132 to a smaller site (CHBA) of the same department.

A case report form was used for each patient enrolled in the study in order to record time of admission to labor room, time of delivery and laboratory information.

RESULTS

Distal vaginal swabs were collected prior to initiation of any antibiotic treatment from each pregnant woman, using swab with liquid Stuart media (Capan).

Within 48 hours of collection, all specimens were sent to the reference laboratory for determining the status of GBS colonization. Each specimen was plated onto a Granada agar (Biomedics, Spain). Then as recommended by CDC’s guidelines for the screening culture procedure, the swab was inoculated and incubated overnight in a selective enrichment Lim broth further sub-cultured on blood agar but also on Granada agar.

“Threshold” for appropriate IAP

To reach the goal of the prevention strategy, we assumed that a threshold of 5 hours to allow admission to the "labor room" (= hospitalization in the obstetrics department), revision of prenatal biological and clinical charts and time elapsed after administration of the first dose of IAP, can be realistic.

DISCUSSION AND CONCLUSION

Within the studied population, 27.3% of the women delivered before reaching the threshold of 5 hours. Among these women the IAP could not have reached the expected and optimum prevention goal.

According to this handicap, everything should be implemented to optimize in a timely manner, the management of pregnant women admitted for delivery as an efficient organization to warranty prompt administration of IAP as soon as possible, when obstetric conditions of the woman allow the screening test to be used, no delay can be afforded "from ward to bench to bed".

Overall there was no significant difference between the numbers of GBS carriers or GBS negative women who delivered within 5 hours after their admission was not significantly different than for GBS-negative women: 27% versus 22.2%.

REFERENCES

- Prevention of perinatal group B streptococcal diseases: Revised guidelines from CDC. MMWR 2002;51 (RR-11), 1-22.