INTRODUCTION (continued)

• GBS is the commonest or among the commonest microorganisms isolated from normally "sterile" sites after passage through the vagina, between membranes, and within the placenta, cord blood, heart blood or spleen at autopsy

• GBS demonstrates pathophysiology virulence capacities which can explain:
  - Intrauterine infection with intact fetal membranes
  - Invasive fetal infection
  - Lethal factors leading to placental or fetal death

"Universal screening and intrapartum antibiotic prophylaxis have had no measurable impact on prenatal-onset disease (including stillbirths and miscarriages). The burden of prenatal-onset GBS disease has not been assessed adequately and no effective prevention tools have been identified before the intrapartum period." CDC MMWR, Nov. 19, 2010/Vol. 59/No. RR-10

GOALS

• Provide rationale for expanded epidemiologic studies to identify strategies which may reduce risks of pre-labor/pre-membrane rupture onset of GBS infection

• Provide basis for classifying cases in which GBS infection occurs prior to term and membrane rupture (including preterm and fullterm live births) as P-OGBS disease in order to better identify effective prevention strategies

RESULTS

Analysis of inquiries and anecdotal cases resulted in:

• Identifying common gaps in care and communication as well as missed opportunities for prevention, e.g., incorrect treatment for vaginitis symptoms

• Opportunity to refine educational materials and promote research topics

CONCLUSIONS

Prenatal-onset GBS intrauterine infection may explain GBS selective culture-based antibiotic chemoprophylaxis (IAP) failure

• Working definitions of P-OGBS invasive disease can allow rapid "Point of Care" microbial testing as well as adjuvant VACCINATION or other novel strategies

RECOMMENDATIONS

• Implement collection of surveillance data for P-GBS disease

• Reconvene well-funded national study group to explore novel strategies to further reduce risk of GBS neonatal disease burden

• Use these strategies separately or in combination with culture-guided IAP:
  - VACCINATION
  - Microbiologic
    - Clinical strategies - screen UTI/ASB
    - Placental triage
  - Further refine microbials screening, i.e., early in pregnancy, UTI/ASB, and in labor or after ROM

• Improve operational procedures to enhance efficacy of IAP

• Encourage pathology testing/autopsies which may also provide valuable information to be reviewed for subsequent pregnancies

REFERENCES

Tudela LA, Best Babies Network, California Hospital Medical Center, Los Angeles, CA; Group B Strept, International, Pomona, CA

ABSTRACT

Background and justify epidemiology, clinically graded ("likely," "possible," or "hypothetical") case definitions of previously unclassified prenatal-onset Group B streptococcal (P-OGBS) invasive disease in order to inform research, advocacy, public policy, clinical care, and social support.

Methods: We used quasi-experimental and qualitative techniques ("open-ended" research) to collect, record, and analyze GBS-related questions from parents and providers from 2000 to 2012. Questions or requests for information arrived unattached over the web ("Internet Commun," or in response to "Survey Grinder" e-mails to personal contacts made at professional meetings and through the Internet from 2000 to 2012. Language was not translated, but all analyzed responses were in English to prompt spontaneity. No written consent was obtained and the process and analysis were not GBS approved.

Results: Twelve years of inquiries and contacts were analyzed. There were no measured differences in question types or topics among parents or providers. (At professional meetings as many as 500 questions were submitted daily making detailed analysis unreliable.)

Twelve years of inquiries and contacts were analyzed. There were no measured differences in question types or topics among parents or providers. (At professional meetings as many as 500 questions were submitted daily making detailed analysis unreliable.)

GOALS

• Provide rationale for expanded epidemiologic studies to identify strategies which may reduce risks of pre-labor/pre-membrane rupture onset of GBS infection

• Provide basis for classifying cases in which GBS infection occurs prior to term and membrane rupture (including preterm and fullterm live births) as P-OGBS disease in order to better identify effective prevention strategies

METHODS

1. Reviewed and analyzed prior observations including animal models, microbiologic findings, microbiologic, immunologic, and clinical experimental

2. Used quasi-experimental and qualitative techniques to collect, record, and analyze GBS-related questions from parents and providers from 2000 to 2012

3. Applied pathophysiology principles including innate and acquired immunity prevention strategies, i.e., vaccination, microbiologic, and clinical strategies to reduce risk of perinatal GBS infection including stillbirth (20-28 weeks gestation) and very early preterm birth and/or late miscarriage (16-20 weeks gestation), to develop and justify putative working case definitions of P-OGBS invasive disease (see Table 1 of Abstract box)

4. Evaluated these definitions using historical "criterion-causal," i.e., Koch's postulates & Bradford Hill causal criteria