GBSI's Information Statement on

Fetal membrane stripping (or "sweeping") (FMS) is a "traditional" way to induce labor and delivery or prevent post-term pregnancy. Anecdotally, FMS appears widely practiced by practitioners despite little formal study. Evidence-based alternatives are:

1) await onset of labor
2) other means of induction

The FMS procedure consists of "forcing" the practitioner's index finger through the cervix and cervical mucous and then forcibly separating the fetal membrane (amnion/chorion, "bag of waters") from the supporting maternal decidua. The procedure is nearly always deemed PAINFUL by patients and providers and is frequently associated with BLEEDING.

FMS is theoretically thought to work by causing NECROSIS (physical and inflammatory cell damage) with subsequent release of prostaglandins (PGs) locally. Non-virulent microbes can cause low grade infection. Virulent microbes can cause more extensive infection which may spread to FETUS/PERINATE (newborn) or PLACENTA or ENDOMETRIUM.

Efficacy of FMS is deemed "indeterminant" or "uncertain" by the authors of the Cochrane Collaboration.

Complications include:

1) BLEEDING (cervical blood may "feed" microorganisms and increase infection)
2) painful contractions (necessitating unscheduled medical assessment and care)
3) intrauterine/perinatal INFECTION
4) FAILURE to induce labor or prevent prolonged gestation
5) PAIN (unanticipated)

Uncommonly, disruption of VASA PREVIA or rupture of membranes (ROM) may lead to perinatal death or disability and unanticipated COSTS and LIABILITIES.

Reasonable contraindications could be assumed to be:

1) failure to reach 39 weeks gestation
2) possible presence of unidentified cervico/vaginal abnormal microflora or infection including GBS, BV, TV, STIs, and virulent pathogens such as *E. coli, Haemophilus influenza*, HSV, or CMV. Presence of abnormal placental vessels or cervical abnormalities represent absolute contraindications

In sum, GBSI recommends:

1) written informed CONSENT
2) complete explanation of induction and the procedure
3) documented consideration of contraindications as would be required for any MEDICAL PROCEDURE

For more information, please contact Dr. James A. McGregor at jamiemcgregor@earthlink.net or GBSI at info@gbs-intl.org.

Cervical exams can transport microorganisms closer to the baby:

"An immediate effect of digital examination is the introduction of vaginal organisms into the cervical canal." The microbiologic effect of digital cervical examination. Imseis HM, Trout WC, Gabbe SG. *Am J Obstet Gynecol.* 180(3 Pt 1):578-80. 1999.

GBS can cross intact membranes:

"Cesarean delivery does not prevent mother-to-child transmission of GBS because **GBS can cross intact amniotic membranes."** *Prevention of Perinatal Group B Streptococcal Disease, Revised Guidelines from CDC, 2010, MMWR, Nov. 19, 2010/Vol. 59/RR-10, Pg 7.*

Cervical exams can increase the risk of perinatal infections:

"There is no clearly established means for the prevention of IAI, but cervical examinations and cervical manipulation can increase the risk, so caution with their use is still warranted. "Pathophysiology, diagnosis, and management of intraamniotic infection. Riggs JW, Blanco JD. *Semin Perinatol.* 22(4):251-9. 1998.

"Obstetricians may want to reconsider doing elective cervical manipulation, at least on patients who have cervical vaginal infection or colonization with potential perinatal pathogens. They may also want to consider providing GBS-specific chemoprophylaxis before membrane stripping." Cervical Manipulations Linked to Perinatal Sepsis: Consider GBS-specific Chemoprophylaxis (Eight Case Reports). Kathryn DeMott *OB/GYN News*, Oct 15, 2001.

Fetal membrane stripping has not been proven to be safe:

"Although concern has been raised about performing other obstetric procedures (e.g., membrane stripping and mechanical and/or pharmacologic cervical ripening) on GBS-colonized women, available **data are not sufficient** to determine whether these procedures are associated with an increased risk for early-onset disease." *Prevention of Perinatal Group B Streptococcal Disease, Revised Guidelines from CDC, 2010, MMWR, Nov. 19, 2010/Vol. 59/RR-10, Pg 4.*

"Furthermore, the risks of membrane stripping in GBS-colonized women have not been investigated; therefore, **data are insufficient** to encourage or discourage this practice in these women." *ACOG Committee Opinion, Number 485, April 2011*

The value of fetal membrane stripping has been repeatedly questioned:

"Routine use of sweeping of membranes from 38 weeks of pregnancy onwards does not seem to produce clinically important benefits. When used as a means for induction of labour, the reduction in the use of more formal methods of induction needs to be balanced against women's discomfort and other adverse effects." Membrane sweeping for induction of labour. Boulvain M, Stan C, Irion O. *Cochrane Database Syst Rev.* 2005 Jan 25;(1):CD000451.

"Frequency of membrane sweeping does not influence the likelihood of remaining undelivered at 41 weeks of pregnancy." Randomized clinical trial evaluating the frequency of membrane sweeping with an unfavorable cervix at 39 weeks**.** K Putnam et al. *Int J Womens Health.* 2011; 3: 287–294.