Best Practice Guideline

I. Preterm Labor

II. Diagnosis and Screening

a. Maternal vital signs, FHR/TOCO monitoring

b. Review patient's medical, obstetrical history, gestational age, pregnancy complications

c. Speculum examination:

i. Cervical dilation/effacement

ii. Status of fetal membranes (intact or ruptured)

iii. Presence and amount of uterine bleeding

iv. Obtain fFN (decide to send to laboratory after complete evaluation)

v. GBS culture if not done within previous 5 weeks

vi. GC/Chlamydia for women at increased risk for these infections

d. Ultrasound examination:

i. Fetal presentation, amniotic fluid volume, fetal weight estimate

ii. Cervical length via transvaginal ultrasound (consider in pregnancies < 34 weeks gestation)

e. Digital examination:

i. Cervical dilation and effacement (after excluding placenta previa and PPROM)

f. Laboratory evaluation:

i. UA and urine culture

ii. Drug testing for patients at risk

III. Surveillance / Follow-up Interval

a. Triage of patients with suspected preterm labor (<34 weeks gestation):

i. Clinical diagnosis of preterm labor (contractions plus cervical dilation >2 cm or effacement >80%) → preterm labor

ii. TV US: CL <2.0 cm → preterm labor likely

iii. TV US: CL >3.0 cm → preterm labor unlikely, discharge home after appropriate observation

iv. TV US: CL 2.0-3.0 cm and FFN + → preterm labor likely

v. CL 2.0-3.0 cm and FFN

1. if contractions cease → preterm labor unlikely, discharge home after appropriate observation

2. if contractions persist →24 hour observation

IV. Treatment Indications

a. Management (<34 weeks gestation) of acute preterm labor :

i. A course of betamethasone

1. Rescue dose if :

a. <33 weeks,

b. >2 weeks from initial course

c. initial course at <28 weeks

ii. Tocolytic drugs for up to 48 hours to delay delivery so that steroids can achieve maximum effect

1. Choice of tocolytic:

a. 24-32 weeks gestation: indomethacin, nifedipine

b. 32-34 weeks gestation: nifedipine, terbutaline

c. Injectable terbutaline should not be used in pregnant women for prevention or prolonged treatment (beyond 48 hrs) of preterm labor. Oral terbutaline should not be used for prevention or any treatment of preterm labor.

iii. Antibiotics for GBS prophylaxis when appropriate

iv. Antibiotics for UTI if diagnosed

v. Magnesium sulfate for neuroprophylaxis

1. pregnancies at 24-32 weeks gestation

2. women at risk for imminent delivery

b. Management after inhibition of acute preterm labor

i. Outpatient management for stable patients

ii. Inpatient management based on risk factors (such as advanced cervical dilation, vaginal bleeding, nonreassuring fetal status, long travel time to a hospital)

iii. No maintenance tocolysis

c. Progesterone supplementation to reduce the risk of spontaneous preterm birth

i. Singleton pregnancy, prior spontaneous preterm birth

1. hydroxyprogesterone caproate 250 mg IM weekly 16-36 weeks gestation

2. cervical length surveillance

ii. Singleton pregnancy, midtrimester (< 25 weeks) cervical shortening

1. vaginal progesterone treatment

References:

American College of Obstetricians and Gynecologists, Committee on Practice Bulletins—Obstetrics. ACOG practice bulletin no. 127: Management of preterm labor. Obstet Gynecol 2012; 119:1308.

Vogel JP, Nardin JM, Dowswell T, et al. Combination of tocolytic agents for inhibiting preterm labour. Cochrane Database Syst Rev 2014; 7:CD006169.

Haas DM, Caldwell DM, Kirkpatrick P, et al. Tocolytic therapy for preterm delivery: systematic review and network meta-analysis. BMJ 2012; 345:e6226.

Neilson JP, West HM, Dowswell T. Betamimetics for inhibiting preterm labour. Cochrane Database Syst Rev 2014; 2:CD004352.

Crowther CA, Brown J, McKinlay CJ, Middleton P. Magnesium sulphate for preventing preterm birth in threatened preterm labour. Cochrane Database Syst Rev 2014; 8:CD001060.

American College of Obstetricians and Gynecologists Committee on Obstetric Practice Society for Maternal-Fetal Medicine. Committee Opinion No. 573: Magnesium sulfate use in obstetrics. Obstet Gynecol 2013; 122:727.

Roos C, Spaanderman ME, Schuit E, et al. Effect of maintenance tocolysis with nifedipine in threatened preterm labor on perinatal outcomes: a randomized controlled trial. JAMA 2013; 309:41.

Parry E, Roos C, Stone P, et al. The NIFTY study: a multicentre randomised double-blind placebo-controlled trial of nifedipine maintenance tocolysis in fetal fibronectin-positive women in threatened preterm labour. Aust N Z J Obstet Gynaecol 2014; 54:231.

Terbutaline: Label Change - Warnings Against Use for Treatment of Preterm Labor
http://www.fda.gov/Safety/MedWatch/SafetyInformation/SafetyAlertsforHumanMedicalProducts/ucm243843.htm

ACOG Committee Opinion No 579: Definition of term pregnancy. Obstet Gynecol 2013; 122:1139.

Han S, Crowther CA, Moore V. Magnesium maintenance therapy for preventing preterm birth after threatened preterm labour. Cochrane Database Syst Rev 2013; :CD000940.

Romero R, Nicolaides K, Conde-Agudelo A, et al. Vaginal progesterone in women with an asymptomatic sonographic short cervix in the midtrimester decreases preterm delivery and neonatal morbidity: a systematic review and metaanalysis of individual patient data. Am J Obstet Gynecol 2012; 206:124.e1.

Committee on Practice Bulletins—Obstetrics, The American College of Obstetricians and Gynecologists. Practice bulletin no. 130: prediction and prevention of preterm birth. Obstet Gynecol 2012; 120:964.

American College of Obstetricians and Gynecologists. ACOG Practice Bulletin No. 120: Use of prophylactic antibiotics in labor and delivery. Obstet Gynecol 2011; 117:1472.