Section: Division of Nursing

Approval: _____

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PROCEDURE
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HACKETTSTOWN COMMUNITY HOSPITAL

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MATERNAL SERVICES
(Scope)

TITLE: ADMINISTRATION OF TERBUTALINE/BRETHINE FOR PRETERM LABOR

PURPOSE: To outline procedure for using Terbutaline/Brethine for treatment of preterm labor.

SUPPORTIVE DATA: See Protocol 6160.028a

EQUIPMENT: See Protocol 6160.028a

CONTENT:

A. 1. Contraindications For Terbutaline Use

1. Ruptured membranes
2. Any uterine bleeding, regardless of the cause
3. Pregnancy induced hypertension, pre-eclampsia, eclampsia
4. Fetal demise
5. Chorioamnionitis
6. Severe IUGR
7. Maternal Cardiac Disease
8. Major fetal anomalies
9. Hyperthyroidism
10. Uncontrolled diabetes
11. Patient on beta blocker

2. Side Effects (IV and Sub-Q administration)

1. Maternal tachycardia
2. Hypotension
3. Muscular tremors
4. Inappropriate behavior
5. Flushing
6. Fetal tachycardia
7. Vomiting
8. Transient hypokalemia
9. Hyperglycemia

*Sub-Q administration causes fewer side effects than IV or PO because lower daily doses are used.

B. PRETERM LABOR PRECAUTION/INSTRUCTIONS FOR ALL MODES OF TERBUTALINE:

1. Explain possible side effects the patient can expect to occur.
2. Explain the need for bedrest, keeping bladder empty, and need to drink (unless NPO.)
3. Explain rationale for left lateral position.
4. Advantages of keeping patient from delivering needs to be explained including possible lung immaturity.
5. If patient smokes, she must be warned that smoking can exacerbate the preterm labor.

6. Reassure patient that if therapy fails and she does deliver, everything possible will be done to stabilize the infant.
7. If patient is taking her own medication, the importance of taking it at the specified time must be explained.
8. Explain need to abstain from sex, orgasm, or nipple stimulation as it stimulates uterus to contract.

C. Initiate Electronic Fetal Monitor (EFM) protocol and procedure.

CONTENT:	PROCEDURE STEPS:	KEY POINTS:
	A. BY MOUTH BRETHINE OR TERBUTALINE	
	1. Obtain physician's order for drug.	Usual dose 2.5mg or 5mg by mouth (2.5 every 2-4 hours or 5mg every 4 hours)
	2. Obtain baseline vital signs, then every 8 hours or more frequently as ordered. Obtain urine specimen and send to lab for U/A.	
	3. Diet ad lib.	
	4. Monitor patient on EFM till contractions subside, then every shift for at least ½ hour.	Fetal heart should be checked every shift for ½ hour.
	5. No intake and output required.	
	6. Explain possible side effects.	Will probably be less severe by mouth than by IV.
	B. SUBCUTANEOUS TERBUTALINE	
	1. Obtain physician's order for drug.	Usual dose is 0.25mg subq. every 20-30 minutes x 3. Then 5 mg po q 6 h. At last S.Q. dose, give Brethine 5mg by mouth.
	2. Obtain a baseline EKG, labs as ordered.	Place on chart.
	3. Obtain baseline vital signs and follow EFM protocol.	Vital signs q 4 hours while patient is receiving drug. Hold med if maternal pulse greater than or equal to 120.
	4. Diet as ordered by physician.	
	5. Explain side effects to patient. Do patient teaching; see Preterm Labor Precautions/Instructions under Supportive Data.	Usual side effects include palpitations, nausea, headache, erythema, flushing, and fetal tachycardia may show up on fetal monitor. Physician is responsible for explaining procedure to patient initially.
	6. Administer the Terbutaline and observe patient.	
	7. Obtain blood glucose and serum K levels	To monitor for hyperglycemia and

after administration as ordered.	hypokalemia.

C. IV TERBUTALINE

1. Treat underlying cause of preterm labor; i.e., bladder infections, etc.	Review U/A results.
2. Keep patient on bedrest on continuous EFM.	Keep patient on left lateral tilt to enhance placental perfusion.
3. Obtain order from physician for route and dosage desired.	Physician is responsible for calculating dosage and for explaining procedure to patient including side effects.
4. Obtain baseline EKG, labs as ordered.	Place on chart.
5. Obtain baseline vital signs--blood pressure, pulse, and fetal heart--then continue to monitor vital signs every 15 minutes during titration and every 30 minutes while on IV maintenance dose.	To establish baseline before giving drug and to determine if levels are therapeutic.
6. Start main line IV as ordered. Terbutaline can be mixed by pharmacist or RN per physician's order. Give by IV pump infuser. Standard dose: 30cc/hr - .005mg/min 60cc/hr - .01 mg/min 90cc/hr - .015mg/min 120cc/hr - .02 mg/min 150cc/hr - .025mg/min	Usual dose is 1000cc LR and 10mg Terbutaline administration by pump via piggyback with a mainline hydration solution (could, also be mixed in D_5W or 1000cc 0.45 normal saline.)
7. Keep patient NPO until stable, then diet as tolerated or ordered.	
8. Intake and output every one hour and document.	Signs and symptoms of circulatory overload and/or pulmonary edema should be checked. Total fluids should not exceed 2400cc/24 hours.
9. Do blood sugars and serum potassium levels every 8-12 hours.	To check for hyperglycemia increase or hypokalemia. Hold med for glucose greater than or equal to 200. Notify healthcare provider.
10. Auscultate lung sounds every shift.	Document assessments.
11. Instruct patient as per signs and symptoms of side effects of this drug	
12. If contractions begin to subside in numbers and intensity, maintain infusion rate for a minimum of one hour. When contractions stop, a dose of S.Q. can be given at the same time of discontinuation and give every 3-4 hours thereafter.	*The advantage of IV Terbutaline is that one can stop the dose of the drug if any adverse reactions occur.

D. DOCUMENTATION

1. Document the drug dosage, the route given, the time administered in QS system.

2. Contractions should be palpated for intensity. Record intensity and intervals between contractions and length of the contraction in QS system.

3. The patient's response to the drug needs to be assessed and documented after each dose.

REFERENCE:

Travis, Britt E., Pharm. D. and McCullogh, Jill M., Pharm. D., "Pharmacotherapy of Preterm Labor," Pharmacotherapy, Volume 13, Nov. 1, 1993.