STANDARDIZED PROCEDURE
NEONATAL PARACENTESIS (Neonatal)

I. Definition

To insert a large bore needle into the peritoneal cavity for the purpose of evacuating fluid or free air.

II. Background Information

A. Setting

Inpatient neonatal patients or outpatient during Emergency Transport of neonatal patients. If appropriate, implement procedural support, if available- make sure Child Life is involved, and use age appropriate language and age appropriate developmental needs with care of children.

B. Supervision

The necessity of the procedure will be determined by the Advanced Health Practitioner (AHP) after verbal consultation with the attending physician or his/her designee. Direct supervision is necessary until competency is determined and the minimum number of procedures is successfully completed, as provided for in the protocol. After that time, the attending physician or his/her designee must be available.

Designee is defined as another attending physician who works directly with the supervising physician and is authorized to oversee the procedures being done by the AHP.

C. Indications

1. To remove excess ascitic fluid or free air from the peritoneal cavity for therapeutic relief of respiratory compromise
2. For diagnostic evaluation of ascites.

D. Precautions/Contraindications

1. Marked bowel distention (correct distension first, using NG suction or rectal tube decompression).
2. Previous abdominal surgery (scar near proposed insertion site).
3. Severe thrombocytopenia (platelet count < 20,000).
4. Clotting abnormalities: Prothrombin time or partial thromboplastin time prolongation of >1.5 times control (relative contraindication; correct these abnormalities first)

The AHP will notify the physician immediately under the following circumstances:

1. Patient decompensation or intolerance to the procedure
2. Outcome of the procedure other than expected

III. Materials

1. ChloraPrep

2. Intravenous catheter – 18 to 22 gauge
3. 20 ml syringe attached to a 3-way stopcock
4. 1% lidocaine without epinephrine
5. 3 ml syringe with 25 to 30 gauge needle
6. Sterile gloves
7. Sterile specimen containers
8. Sterile gauze dressing
9. Morphine Sulfate or other pain medication

IV. Neonatal Paracentesis

A. Pre-treatment evaluation

1. If time permits, premedicate infant for pain control and/or sedation. Assess need for further medication throughout the procedure.
2. Aspirate gastric contents

B. Set up (if applicable)

1. Gather necessary materials

C. Patient Preparation

1. If time permits, inform the patient/family of the treatment plan, otherwise notify them after the procedure is completed.
2. Monitor the patient's cardiorespiratory status & oxygen saturations throughout the procedure

D. Procedure

1. Perform time out with all appropriate steps.
2. Place infant in the appropriate position, i.e. 30-45 degree side-lying position toward to affected side.
3. Identify insertion site: in the neonate this is 2-3 cm below the umbilicus and lateral to the rectus abdominis muscle to avoid the liver and spleen.
4. Put on sterile gloves

5. Prep the insertion site with ChloraPrep. Allow to dry.

6. Insert appropriate amount of 1% Lidocaine subcutaneously with a small gauge needle in a circular fashion.

7. Insert the intravenous catheter at a 30 to 45 degree angle while the other hand pulls downward on the skin forming a Z-track upon release of skin and removal of needle.

8. Advance the needle while applying negative pressure on the syringe until a sudden decrease in resistance is felt and fluid is visible in the syringe.

9. Hold the needle immobile while advancing the catheter into the peritoneal space.

10. Remove the needle and attach a 20 ml syringe with stopcock to catheter.

11. Slowly aspirate fluid until no more is obtained.

12. Pull out catheter and observe insertion site for leakage. Use sterile gauze dressing as needed.

E. Follow-up treatment

Place collected peritoneal fluid in sterile containers to be sent to the laboratory for diagnostic evaluation including: cell count and differential, Gram stain, cultures, acid-fast bacillus smear, cytology, total protein, albumin, glucose, amylase, blood urea nitrogen, electrolytes, creatinine and specific gravity.

F. Termination of treatment

When air or fluid is evacuated

G. Potential Complications:

Complications are very rare but should be watched for. The most common are:

1. Persistent peritoneal leak – resolved by placing pressure over the site for several minutes, applying a pressure dressing and monitoring the site frequently or by suturing the site.

2. Abdominal wall hematoma – usually self-limiting. If the patient has a coagulopathy and the hematoma expands, correct abnormal clotting factors.

3. Scrotal swelling – from the dissection of fluid between the abdominal wall layers. Also usually self-limiting.

Other complications include:

4. Intraperitoneal hemorrhage.

5. Bowel or bladder puncture.

6. Peritonitis.

IV. Documentation

A. Documentation is in the electronic medical record

1. Documentation of the pretreatment evaluation and any abnormal physical findings.
2. Record the time out, indication for the procedure, procedure, type and size of needle / catheter used, EBL, amount of fluid or air removed, color and clarity of fluid removed, how the patient tolerated the procedure, medications (drug, dose, route, & time) given, complications, and the plan in the note, as well what labs were sent on the fluid.

B. All abnormal findings are reviewed with Attending or supervising physician

V. Competency Assessment

A. Initial Competence

1. The AHP will observe the procedure in its entirety at least once. Under the direct supervision of the attending physician the AHP will perform neonatal paracentesis successfully **three** times and will be evaluated for competence and technical skill.
2. The AHP will demonstrate knowledge of the following:
   a. Medical indication and contraindications of neonatal paracentesis
   b. Risks and benefits of the procedure
   c. Related anatomy and physiology
   d. Consent process (if applicable)
   e. Steps in performing the procedure
   f. Documentation of the procedure
   g. Ability to interpret results and implications in management.
3. The AHP will ensure the completion of competency sign off documents and send them directly to the medical staff office.

B. Continued proficiency

1. The AHP will demonstrate competence by successful completion of the initial competency.
2. Each candidate will be initially proctored and signed off by an attending physician. AHPs must perform this procedure at least **three** times per year. In cases where this minimum is not met, the AHP must demonstrate skill with this procedure in a simulation or skills lab, or the attending, must again sign off the procedure for the AHP. The AHP will be signed off after demonstrating 100% accuracy in completing the procedure.

3. Demonstration of continued proficiency shall be monitored through the annual evaluation.
4. A clinical practice outcomes log is to be submitted with each renewal of credentials. It will include the number of procedures performed per year and any adverse outcomes. If an adverse outcome occurred, a copy of the procedure note will be submitted.

VII. RESPONSIBILITY

Questions about this procedure should be directed to the Chief Nursing and Patient Care Services Officer at 353-4380.

VIII. HISTORY OF POLICY

Initial policy approved 1986 by CIDP and EMB
Revised 4/89, 1/93, 5/01, 7/03, 12/05, 6/08, 2/11
Revised most recently July 2012 by Subcommittee of the Committee for Interdisciplinary Practice
Reviewed most recently July 2012 by the Committee on Interdisciplinary Practice
Approved most recently July 2012 by the Executive Medical Board and the Governance Advisory Council.