PROTOCOL FOR HYLENEX USE BY GLENNON CARE MD’S

The purpose of this protocol is to document when and how Hylenex (recombinant hyaluronidase human injection) is used in SSM community hospitals. Some of this information was provided by Baxter International Inc.

Skill Level:
RN

Purpose:
Hylenex is used to facilitate rehydration though subcutaneous fluid administration. Hylenex is the adjunct for subcutaneous fluid administration and allows for short term rehydration. It may be used until venous access is achieved. It may precede oral rehydration.

Indication – Children 2 months and older needing rehydration. IV access attempted x2 without success. Oral rehydration is unsuccessful or not an option.

MD Assessment – When Hylenex is indicated the nurse calls MD to re-evaluate child. MD orders Hylenex and MD explains procedure to parents.

Patient Preparation:
1. Explain the procedure to the patient and/or parents
2. Gather equipment
3. Select and prepare site

Equipment:
- Hylenex (Hyaluronidase) 150units/ml – 1 vial (Pharmacy Stock)
- Gloves
- 24-27 gauge ¾ inch or ½ inch Angioset (butterfly) needle
- PRN adaptor
- IV start kit
- Tape
- IV pump
- 3 ml syringe
- Desired fluid (Isotonic crystalloid: Normal Saline and LR; Isotonic Dextrose: D5 NS)
- Infusion set

Infusion Location:
1. Scapula region
2. Anterior or lateral aspects of thigh (not recommended as first choice because of cosmetic concerns. To be used if scapula region compromised. See #3).
3. Avoid areas of compromised integrity i.e.: edema, infection, scars, pain, bruising or hematomas.
4. Select a site with adequate subcutaneous tissue (pinch ½ to 1 inch)

Procedure:
1. Remove any excess hair from selected site if indicated.
2. Clean site as per IV prep protocol.
3. Select access device (general recommendations suggest use of smallest gauge and shortest length possible to establish subcutaneous access)
4. Assemble equipment as listed earlier.
5. Insert the selected device with bevel up and directed toward the patients head. The tissue should be pinched to ensure subcutaneous placement. Generally a 30 to 45 degree angle to skin surface is best.
6. Observe insertion site. If blood return is noted, remove the device and prepare a new site.
7. Apply transparent sterile dressing over the insertion site and secure the device with tape. (Usually the chevron technique is more secure) It is recommended to loosely apply the transparent dressing to allow for temporary stretching of skin
8. Label the site, pump, and tubing as “subcutaneous use only”

Hylenex Administration:
1. Draw up the Hylenex 1 mL in a 3mL syringe. Remove the needle and attach directly to the PRN adapter at the insertion site.
2. Slowly inject the Hylenex into the subcutaneous space.
3. Remove the syringe and attach the IV set and tubing.
4. The initial infusion of fluid should begin slowly and gradually increase as the Hylenex facilitates absorption of the fluid.
5. Initiation of the fluid can begin immediately after the injection of Hylenex but Hylenex may take up to 15 minutes for maximum effects on the subcutaneous tissue.
6. One vial of Hylenex (150 units/ 1mL) will facilitate the absorption of 1,000 mL or more every 24 hours.

Fluid Infusion:
1. Use only isotonic crystalloid: NS and LR, or isotonic dextrose sol'n: D5NS. Dextrose alone (D5 W or D10 W) is NOT recommended.
2. Fluid bolus of 20 mL/kg over one hour is recommended for isotonic crystalloid. Maintenance fluid rates are recommended for isotonic dextrose.
3. The subcutaneous infusion should never exceed set standards for IV infusion rates
4. The infusion should begin by administering the fluid at ¼ the ordered rate for the first 10 minutes. Monitor the patient’s response. If tolerated, then increase to ½ the ordered rate for 10 minutes. If tolerated, then increase to the full ordered rate for the remainder of time. (Refer to MD order sheet)
5. Subcutaneous fluids should be administered by use of administration pump.
6. Monitor patient response and infusion sites per protocols. Observe and report the following:
- Signs/Symptoms of fluid overload
- Erythema
- Fluid leakage
- Infection
- Catheter dislodgement
- The subcutaneous site can be utilized unless skin reactions, cellulitis, or pain develops
- Hylenex should be given once every 24 hours to facilitate continuous infusion.

Site Maintenance:
1. Monitor according to IV site policy and procedure
2. Butterfly should be replaced if bruising, moderate-severe erythema or other signs of local irritation or infections occur. The butterfly may also be removed if site becomes painful to the patient.
3. Change the transparent dressing if soiled or leakage has occurred.

Device Removal:
1. Remove the transparent dressing and tape
2. Remove the catheter using clean technique
3. Assure that butterfly is intact
4. Apply pressure with sterile gauze
5. Apply dressing to site as indicated

Procedure Considerations:
1. The procedure is contraindicated in hypersensitivity to Hylenex
2. Significant hyponatremia (Na <130) or hypokalemia (K <3.5).
3. Life threatening or emergency situations where rapid fluid replacement is required
4. Avoid areas of compromised integrity such as edema, pain, excoriation, infections, bruising, hematoma, or scar tissue.

Documentation:
1. Type of fluid administered
2. Volume/rate
3. Route of administration
4. Date and time
5. Skin integrity and location of site
6. Patient response
7. Adverse reactions or complications
8. Implementation of Hylenex protocol
9. Document Hylenex, IV fluid, and site on MAR