Parenteral Nutrition - Placement of Additives

Purpose

The purpose of this procedure is to establish guidelines for placing additives in the parenteral nutrition (PN) mixture.

Preparation

1. Verify with state Nurse Practice Act the role of the licensed nurse and requirements for RN coverage on the unit while PN is infusing.
2. The nurse placing the additives into the PN bag must have received training and demonstrated competency related to the handling of PN prior to performing this procedure.
3. Maintain aseptic technique when working with PN. The room where the additives are placed in PN bag must be clean and away from general traffic.
4. Check expiration dates on additive bottles/vials and inspect the PN solution for deterioration or breakdown before placing additives.
5. Check additives for compatibility before adding to the PN solution.

General Guidelines

1. Additives are medications or supplements that are added to the PN solution just before infusing the PN. Examples of additives include multi-vitamins, vitamin K, H2 blockers and insulin.
2. Medications added to PN are stable for ≤ 24 hours. Parenteral nutrition solutions may be delivered from the pharmacy in quantities that last 3-4 days. Therefore, medications are added to the PN at the facility rather than at the pharmacy.
3. Place additives in PN bag before the bag is connected to the resident. Never add medications while PN is infusing; this could result in a bolus dose of medication.
4. Place additives in the PN mixture immediately before administering the PN to the resident.
5. Add medications to the PN bag one at a time using a new syringe for each medication.
6. When additive is placed in bag, rotate bag back and forth. DO NOT SHAKE BAG.

Equipment and Supplies

1. Parenteral nutrition solution;
2. Alcohol wipes;
3. Filter straw for glass medication ampules;
4. Sterile syringe for each additive;
5. Sterile injection needle(s) or needleless system to access medication containers and injection port of bag;
6. Sharps container;
7. Non-sterile gloves; and
8. Waterproof barrier for counter top.

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Steps in the Procedure

1. Verify orders for PN. Check orders against PN bag label. If they do not match, call pharmacy and verify.
2. Verify orders for additives.
3. Check compatibility of medications.
4. Clean countertop with alcohol, soap and water, or antimicrobial solution. Place waterproof barrier on counter top.
5. Perform hand antisepsis. Don non-sterile gloves.
6. Assemble equipment and medication additives.
7. Clean injection port of PN bag with 70% alcohol wipes.
8. Draw up additives one at a time in separate sterile syringes. Use filter straw to draw up medications from glass ampules.
9. Place additives into PN bag one at a time. Rotate bag back and forth gently in between medications to mix medicines. **DO NOT SHAKE BAG.**
10. Wipe injection port with alcohol in between each additive.
11. Document medications added to the PN solution on a label affixed to the PN bag.
12. Prepare bag to be hung after the addition of additives.
13. Discard used equipment according to facility procedure.

Documentation

The following should be documented in the resident’s medical record:

1. Additives (Document on label affixed to PN bag AND medication administration record).
2. If there was any visible deterioration in the PN solution and notification of the pharmacy.
3. Any communication with physician, supervisor, or oncoming shift (Document in the nurses’ notes).

Reporting

1. Report any problems or complications with the PN solution or the additives to the pharmacy.
2. Report any complications with the procedure to the Director of Nursing Services or the physician.
3. Report any changes in the resident’s condition to the physician.
4. Any changes in PN formula.

References

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