ADMINISTRATION OF INTRAVENOUS GAMMA GLOBULIN (IgG) (ADULT/PEDIATRICS/ADOLESCENTS/NEONATAL) (med07)

To establish a procedure for the administration of IV Gamma Globulin (IgG).

Gamma Globulin (IgG) is a liquid intravenous (IV) solution of human immunoglobulins, prepared in a sterile process. It supplies a broad spectrum of opsonic and neutralizing IgG antibodies for the prevention of a wide variety of diseases.

Pre-medicate the patient (exception: neonates) as ordered by the physician to decrease the risk of side effects.

In neonates, Gamma Globulin is no longer indicated for treatment of sepsis. It is still recommended for use in the management of hyperbilirubinemia in the newborn infant of 35 or more weeks gestation.

Side effects that may occur with IV IgG include but are not limited to: flushing, headache, vomiting, hives, coughing, malaise, respiratory distress, faintness, fever, rigors, chest, back or hip pain, thrombotic or renal complications, pulmonary complications, and anaphylaxis. An adverse reaction generally occurs 30 minutes to one hour after initiation of the infusion, but can occur at any time during the infusion or after the infusion is complete. Anaphylactic reactions to IV IgG may occur in patients with prior history of severe reaction to IM IgG.

IV IgG should not be administered concurrently with any IV solution or any other IV medications.

Instruct patient/support person regarding the side effects.

Teach patient/support person to report side effects immediately, such as fever, chills, rigors, headache, flushing, increased heart rate, shortness of breath, coughing, bone and joint pain, hives, itching, nausea and
vomiting (Younger et al, p. 62).

EQUIPMENT:  Assemble the following:

1. Electronic infusion device
2. Primary IV tubing
3. Prescribed dose of IgG as mixed by Pharmacy
4. IV flush solution. Check manufacturer’s product
   information or consult pharmacy for IV flush compatibility
5. Gloves

PROCEDURE:

1. Obtain and record patient weight in kilograms and
   baseline vital signs. Assess for weight change, acute
   illness, infection or diarrhea. If present, notify physician
   before proceeding with infusion.

2. Determine brand of IgG dispensed from Pharmacy.

3. **Nurses will use the appropriate flushes:**

   a. For adult patients, the nurse will use two 12 ml syringes of
      normal saline for flushing.

   b. For the Pediatrics Unit, five 10 mL D5W syringes will be
      dispensed. (Do not draw D5W from a solution bag to use for
      the flushes.)

   c. For NICU, lines will be flushed with the infant’s ordered
      flush (0.9%, 0.45%, or 0.225% sodium chloride). Flush volume
      is 1mL for infants less than 1500gm and 3mL for infants
      1500gm or greater.


5. Perform hand hygiene.

6. Don gloves and prime IV tubing with IgG and place on
   the volumetric pump. Set electronic infusion device to
   rate as calculated by the Pharmacy according to
   manufacturer’s recommendations, or as patient tolerates.
   Infusion rate calculators created by Pharmacy may be
   accessed through the Sarasota Memorial Infusion
   department webpage.

7. **Infusion Rate:**
a. The infusion rate will be provided by Pharmacy and is dependent upon brand, manufacturer recommendation, and if patient tolerates without adverse reaction.  
**Adults:** Take vital signs prior to infusion and assess for reaction after 30 minutes, after each infusion rate adjustment, and at the end of the infusion.  
**Pediatrics:** Take vital signs prior to infusion, after each rate change, then every 30 minutes x2, and then hourly until infusion complete.

b. If vital signs and the patient remain stable, increase infusion rate to complete the infusion (including flush) within the specified time period.

c. Never exceed the Pharmacy’s maximum rate as determined by the manufacturer’s recommended rate.

d. The infusion rate for Pediatrics will be specific to weight by the Pharmacy and labeled “Pediatric”.

e. For NICU, the dose of IgG will be infused over 4 hours.

#### Nursing Considerations

1. If side effects do occur, stop the infusion, and maintain IV access with appropriate IV flush solution as patient condition warrants. The type of flush solution is dependent upon the IgG brand used. Notify the physician of any reaction and any changes in patient condition. Management of these reactions include slowing or stopping the infusion, medicating the patient for the reaction, and/or restarting the infusion at a lower rate once symptoms have subsided (Younger et al, p. 62). (See Troubleshooting Infusion Problems below.)

2. Future infusions can be given at rates as tolerated by the patient within the manufacturer’s guidelines. This information is available in the patient’s record (Younger et al, p. 65).
DOCUMENTATION:

1. **Vital Sign Flowsheet:** Document vital signs.

2. **Nursing Assessment/Reassessment Flowsheet:** Document the patient tolerance of the infusion and any other pertinent data.

3. **Patient Education:** Document patient education and educational materials provided in the medical record.

4. **EMAR/Nursing Flowsheet Assessment/Reassessment Flowsheet:** Document administration and dosage. Document any pre-medications or medications given for adverse/side effects. Document total number of grams provided, IVIG brand and concentration.

REFERENCE:


