SUBJECT: **Intravenous Infusion: Immunoglobulin (IVIG)**

Purpose: To address the use of Intravenous Immunoglobulin (IVIG) as a replacement of antibodies for patients who have antibody deficiencies. Immunoglobulin is a blood product that contains IgG immunoglobulins (antibodies) extracted from plasma.

Performed By: RN

Physician's Order Required: Yes

Equipment: IVIG, Filtered IV administration set (if recommended for brand) provided by pharmacy, saline flushes, IV pump

Policy Statements:

1. There are several brands of IVIG available. Physician must specify product type.
2. An infusion pump must be used for all IVIG infusions.
3. RN will verify there is a complete prescriber's order that includes:
   - Drug name and purpose for infusion
   - Route
   - Rate – specific infusion rate
   - Infusion time frame
   - Pre-medications and PRN medications
4. Patients should NOT be volume depleted prior to the initiation of the infusion. If additional hydration is needed prior to and after IVIG infusion, provider will order as appropriate.
5. Follow manufacturer's recommendation on dosage and priming solution as these may vary based on the therapeutic use and by brand. Always consult with the ordering prescriber and/or a pharmacist with any questions.
6. The recommended initial infusion rate is 0.5 mg/kg/hr. (0.8mg/kg/min) for 30 mins. If the infusion is well tolerated, gradually titrate up to a maximum of 5ml/kg/hr (8mg/kg/min).
   Key Point: Infusion rates vary and are individualized per patient. Follow manufacturer's recommendations and pharmacy instructions.
7. Designate a separate line to administer IVIG. Do not mix with other IV solutions or drugs and consult with a pharmacist if necessary, for any additional compatibility information.
8. A filter may be required to administer IVIG depending on the brand of IVIG used. Consult with a pharmacist regarding the use of filter before administration.
9. IVIG must be infused as soon as possible post reconstitution by pharmacy.
10. IVIG should be administered via the largest IV catheter possible to prevent IV site discomfort.
11. In certain instances, anaphylaxis may occur during administration and epinephrine must be readily available to be used as an immediate treatment.

A. Contraindications:

1. Previous anaphylactic or severe systemic reaction to the administration of human immune globulin.

2. Hyperprolinemia
3. Use cautiously in patients with history of cardiovascular disease or thrombotic episodes.
4. Selective IgA deficiency
   Key Point: Patient can develop antibodies to IgA and anaphylaxis after administration of blood components containing IgA. Some brands of IVIG may contain trace amounts of IgA.

B. Procedure:

1. Ensure there is an informed consent for IVIG administration in the medical record.
2. Ensure laboratory workup is complete as ordered prior to IVIG infusion. Report abnormal results to provider prior to infusion.
3. Pre-medicate patient as ordered.
4. Ensure patient has a patent IV catheter.
5. Prime IV tubing with the medication.
6. Set rate as ordered or as recommended by pharmacy.
7. Initiate infusion.

C. Monitoring:

1. Observe the patient closely and record vital signs upon initiation and completion of the administration and document as follows:
   a. Prior to initiation (baseline)
   b. Every 15 minutes x4 and after any changes in rate, then
   c. Every hour thereafter and after any changes in rate during administration
   d. After completion of administration
2. Monitor the patient for signs of infusion reaction, which include:
   a. Fever
   b. Chills
   c. Nausea
   d. Vomiting
   e. Shock
3. Monitor for pulmonary adverse reactions - Transfusion Related Acute Lung Injury (TRALI)
   a. Acute dyspnea
   b. Hypertension
   c. Hypotension
   d. Acute leukopenia
4. Monitor patient for the following side effects:
   a. Headache
   b. Pain
   c. Fatigue
   d. Nausea
   e. Chills
   f. Vomiting
   g. Pyrexia
   h. Cough
   i. Diarrhea
   j. Stomach discomfort
   k. Muscular pain
   l. Malaise

D. Suspected Reaction:

1. If any reaction is suspected and/or the patient reports any unusual symptoms, the nurse monitoring the patient must stop the administration/infusion immediately and notify the prescriber.

2. Disconnect IV administration set and flush the peripheral intravenous line with normal saline.

E. Documentation:

1. Vital signs
2. IVIG administration on the Medication Administration Record (MAR) in ORCHID.
3. Amount of IVIG administered as intake
4. Absence or presence of a reaction
5. Unusual symptoms and any interventions or treatments provided
6. Complete ORCHID task list and infusion documentation

F. Patient Education:

1. Document all education in the Electronic Health Record (EHR).
2. Instruct patient to notify the staff if they are experiencing any unusual symptoms during the IVIG infusion as listed above.
3. Instruct the patient to immediately report symptoms of decreased urine output, fluid retention/edema and or/shortness of breath.
4. Inform patient that administration of IVIG may transiently impair the effectiveness of live virus vaccines and they must inform their physician of a recent therapy of IVIG prior to receiving any vaccination.

Revised by: Julie Villalobos, MSN, RN, PHN and Tomas Jaca, RN

References:

GAMMAGARD LIQUID. (2021). *GAMMAGARD LIQUID [Immune Globulin Infusion (Human)] 10%*. Shire Product Information. https://www.shirecontent.com/PI/PDFs/Gamliquid_USA_ENG.pdf

Lippincott Procedures. (2022). *IV IM Immune Globulin (IVIG) Administration*. Lippincott Procedures. https://procedures.lww.com/lnp/view.do?pId=7026358&hits=ivig&a=true&ad=false&q=IVIG

01/14 – New
10/16 – Revised
09/19 – Revised
10/22 - Revised