MUNSON HEALTHCARE

Form # 8729 (10/14)

AUTHORIZATION IS GRANTED TO DISPENSE AND ADMINISTER AN ALTERNATE DRUG PRODUCT ACCEPTABLE TO THE MEDICAL STAFF'S PHARMACY COMMITTEE UNLESS THE DRUG PRODUCT IS SPECIFICALLY CIRCLED.

1. Allergies / Sensitivities (include types of reactions)_____

_____

2. Height:_____cm Actual Weight:_____kg

3. **INDICATION**

Hypogammaglobulinemia
- ☐ Hereditary
- ☐ Nonfamilial

Common Variable Immunodeficiency - CVID
- ☐ with predominant abnormalities of B-cell numbers & function
- ☐ with autoantibodies to B or T-cells
- ☐ other common variable immunodeficiencies
- ☐ unspecified

- ☐ **Idiopathic Thrombocytopenic Purpura - ITP**
- ☐ **Kawasaki Disease (Mucocutaneous Lymph Node Syndrome)**
- ☐ Other_____

IVIG is dosed using Ideal Body Weight (IBW). Use the following formula to calculate IBW.

- For children LESS than 152cm tall use actual body weight.
- For children 152cm or taller
  - IBW (**males**) = 39 + 0.9 (H - 152), where H is height in centimeters and IBW is weight in kilograms
  - IBW (**females**) = 42.2 + 0.9 (H - 152), where H is height in centimeters and IBW is weight in kilograms

4. **LABORATORY**
   - ☐ IgG Level - Draw level prior to starting IVIG infusion (Recommended to evaluate level each year).
   - ☐ IgG Level with Subclasses - Draw level prior to starting IVIG infusion.

5. **PRETREATMENT and MONITORING -** *Give the following pre-medications 30 minutes prior to the start of infusion.*
   - ☐ None
   - ☐ Acetaminophen (15 mg/kg) _____ mg PO (Maximum: 650 mg/dose)
   - ☐ Acetaminophen (15 mg/kg) _____ mg PR (Maximum: 650 mg/dose)
   - ☐ Diphenhydramine (1.25 mg/kg) _____ mg PO (Maximum: 50 mg/dose)
   - ☐ Diphenhydramine (1.25 mg/kg) _____ mg IV (Maximum: 50 mg/dose)
   - ☐ Hydrocortisone (2.5 mg/kg) _____ mg IV (Maximum: 100 mg/dose)
   - Nursing to assess hydration. Call prescribing physician if patient may be volume depleted prior to beginning infusion.
   - Obtain baseline vital signs (BP, pulse, respirations, temperature) pre-infusion, then Q15 minutes until maximum delivery rate is reached. Then every hour times 2, then Q2 hours until completed and 15 -30 minutes after the completion of the infusion.

6. **DOSING OF IVIG**

☐ IVIG (_____ mg/kg) IV Frequency _____ Total Dose: _____ grams (Round to the nearest 5 gm +/- 5%. If rounding to nearest 5 gm exceeds +/- 5% call provider for approval.)

Duration_____doses or _____weeks (Maximum duration of 1 year) - if not specified, the order will be considered as a one-time order and must be rewritten. Refer to back page for specific infusion instructions.

7. **ADMINISTRATION and MONITORING**

☐ *Gammagard (IVIG) Liquid*
- Begin infusion at 0.8 mg/kg/min for 30 minutes, if tolerated continue to increase every 30 minutes: 2 mg/kg/min, then 4 mg/kg/min, then 6 mg/kg/min, then to **maximum rate of 8 mg/kg/min**. (Max rate for pre-existing renal insufficiency or thrombotic risk is 3.3 mg/kg/min).
- Use of an inline filter is optional.
- Patients who have underlying renal disease or who are judged to be at risk of developing thromboembolic events should not be infused rapidly with any IVIG product. Maximum infusion rate for pre-existing renal insufficiency or thrombotic risk is 3.3 mg/kg/min.
- **IVIG is to be administered with a separate infusion line with no other medications.**
- **Patients who are on long term IVIG therapy may have physician orders with a more rapid titration rate to decrease total infusion time.**

Monitoring
- For common reactions (including fever, nausea, or vomiting)
  - Temporarily stop or slow infusion rate to that previously tolerated by patient and treat symptoms as required
- For chills or rigors decrease infusion rate to that previously tolerated by patient and notify physician
- For serious reactions including hypotension, angioedema, bronchospasms, dyspnea, and anaphylaxis
  - Stop infusion, notify physician, and treat symptoms as required.
  - Begin IV of 0.9% Sodium Chloride to keep line open.
  - Administer diphenhydramine 1.25 mg/kg IVP (max 50mg), hydrocortisone 2.5mg/kg IVP (max: 100mg), epinephrine 0.01mg/kg IM (max: 0.3mg)

Patient ID Label

The physician's full signature, date & time is to follow the order - Abbreviations for names are not acceptable.

_____

Signature Date Time

IVIG PEDIATRIC ORDERS

Pediatric Administration Considerations for IVIG Orders

Patients who have underlying renal disease or who are judged to be at risk of developing thrombotic events should not be infused rapidly with any IVIG product

- Hyperviscosity
- Diabetes
- Volume Depletion
- Sepsis
- Concurrent nephrotoxic drugs
- Paraproteinemia
- Atherosclerosis
- Multiple CV risk factors
- Impaired Cardiac Output

- Nursing to assess patient's hydration level. Call prescribing physician if patient may be volume depleted prior to beginning infusion.
- No other medication through the same line with IVIG

INFUSION GUIDELINES

Gammagard Liquid 10%

- Begin infusion at 0.8 mg/kg/min for 30 minutes, then increase as follows:
    - Every 30 minutes if tolerated: 2 mg/kg/min, then 4 mg/kg/min, then 6 mg/kg/min, then to max rate of 8 mg/kg/min.
- Max rate for pre-existing renal insufficiency or thrombotic risk (see above) is 3.3 mg/kg/min

ADVERSE EFFECTS

- Common: headaches, fatigue, backache, leg cramps, lightheadedness, fever, urticaria, flushing, slight elevation of blood pressure, nausea, vomiting.
    - *Temporarily stop or slow infusion rate to that previously tolerated by patient and treat symptoms as required - Call provider if patient has chills or rigors*
- Serious side effects (rare): hypotension, angioedema, bronchospasms, dyspnea, renal failure, aseptic meningitis, transfusion-related lung injury, thrombotic events and anaphylaxis.
    - Stop infusion, notify physician, and treat symptoms as require and ordered. Begin IV of Sodium Chloride 0.9% to keep line, open. Administer diphenhydramine 1.25 mg/kg IVP (max 50mg), hydrocortisone 2.5 mg/kg IVP (max 100 mg), and epinephrine 0.01mg/kg IM (max: 0.3 mg IM) as ordered.
- Anaphylaxis risk increases with repeated administrations of IVIG products.
- Caution should be used in patients with IgA less than 0.05 g/L.

USUAL DOSES

- Dose or frequency may be adjusted relative to serum IgG levels when used for immunodeficiency syndrome or B-cell Chronic Lymphocytic Leukemia
    - Primary Immunodeficiency- 300-600 mg/kg once every month
    - Idiopathic Thrombocytopenic Purpura - 400-1000 mg/kg daily x 2-5 days; additional doses based upon clinical response
    - Kawasaki Syndrome - 2000 mg/kg x 1 over 10-12 hours or 400 mg/kg daily x 4 days

NURSING CONSIDERATIONS

- May be infused peripherally; large bore veins are recommended to decrease discomfort at infusion site
- IVIG line may be flushed with 0.9% Sodium Chloride; do not y-site any solutions containing Sodium Chloride with IVIG.
- Administer at room temperature
- IVIG is derived from pooled human plasma; handle as a blood product
- Do not shake or use pneumatic tube
- **Nursing Care:**
    - Take baseline set of vitals and temperature
    - Pre-medication, if ordered, give 30-60 minutes prior to administration
    - In some patients fluid intolerance is a complication. Observe for tachycardia, rales, etc. and notify physician.
- **IVIG administration may decrease patient's antibody response to vaccines and increase side effects.**
    - Alert patient/family to discuss any needed vaccinations with physician prior to receiving vaccinations post infusion.
    - Assess whether the patient has had vaccines in the last month and inform the physician.