Infusion Protocol

Immune globulin (IVIG)

Indication:

Not FDA approved for use as disease modification. Used off label.

Derived from the plasma of paid donors. Is used in the treatment of an array of disorders. Production of IVIG takes approximately 9 months. The process begins with pooled human plasma from several thousand (more than 15,000 but not to exceed 60,000) screened paid and volunteer donors.

Obtain a complete blood count (CBC), hepatic transaminases, metabolic panel including glucose, serum creatinine and urinalysis before initiating IVIG. This may identify pre-existing infection or risk for complications.

Special Considerations:

Maltose products may increase blood glucose in diabetics.

Sucrose product may not be administered to those with high fructose intolerance.

Those intolerable of increased intravascular volume may do better with low sodium or albumin products.

Hemolytic anemia can occur at high doses.

Assess IgA as antibodies can cause anaphylaxis.

Choose an immunoglobulin product with very low IgA content when treating an autoimmune process in a patient with undetectable levels (<7 mg/dL) of IgA.

Use a product with low osmolality in those at risk for thrombotic complications (immobility, elevated lipoproteins, monoclonal gammopathies…).

Changing IV products is associated with more frequent and severe adverse reactions.

Pre-Medications:

None required. Some patients may receive acetaminophen or NSAID to prevent inflammatory or anaphylactoid symptoms. Some may receive antihistamine: diphenhydramine 1 mg/kg (max 50 mg) orally or intravenously.

Glucocorticoids can be given to those who experience severe reactions such as headache. Dose two oral methylprednisilone or prednisone hours before the infusion. Can be given with breakfast at 40 to 60 mg. or same does IV 30 minutes prior to IVIG infusion.

Pre-Hydration:

Ample oral fluids or IV hydration 30 mL/kg.

Dose for inflammatory and autoimmune disorders: 2 mg/kg; in those older (>65) and those with underlying conditions predisposing to thrombosis or other complications, give doses larger than 1 mg/kg over several consecutive days so that no more than 500 mg/kg are given in a 24-hour period.

Infusion Rate:

Increase the rate to 0.02 mL/kg per minute, then 0.04 mL/kg per minute and in one or two additional increments until a maximum rate of 0.08 mL/kg per minute (4 or 8 mg/kg per minute if 5% or 10% solutions are used, respectively) is achieved.

For obese patients calculate adjusted body weight (ABW) based on ideal body weight (IBW) for females 45.5 kg + 2.3 kg for each inch over 5 ft and ideal body weight for males 50 kg + 2.3 kg for each inch over 5 feet; ABW = IBW + (0.4 * [Actual weight - IBW]).

Monitoring:

The patient should be well hydrated and monitored closely for hemolysis.

Several IVIG products have been associated with positive Coombs (direct antiglobulin) tests (DAT) and/or frank hemolysis. Thus, when high-dose IVIG is to be given over two or more days for treating autoimmune disorders, it is prudent to check for a drop in hemoglobin and/or Coombs positivity before proceeding with the second or subsequent doses-switch to a different IVIG preparation.

References:

- UpToDate: Overview of intravenous immune globulin (IVIG) therapy, [www.uptodate.com/contents/overview-of-intravenous-immune-globulin-ivig-therapy]