**Lymphocyte Immune Globulin**

(Immunoglobulin G, human, N-(2-hydroxypropyl)methyl)

*Trade Names: Atgam, Atgam A-Monophase, Lymphega,*

**Classification**

*Immunosuppressants, Immune Modulators*

**Pregnancy Category:** C

**Indications**

Management of allograft rejection in renal transplant patients. Treatment of aplastic anemia in patients who are not candidates for bone marrow transplantation.

**Action**

Decreases the circulating number of T lymphocytes, which are involved in both cell-mediated and humoral immunity. Therapeutic Effects: Resolution of rejection of renal allografts. Remission of aplastic anemia.

**Pharmacokinetics**

- **Absorption:** IV administration results in complete bioavailability.
- **Distribution:** Unknown.
- **Metabolism and Excretion:** Unknown.
- **Half-life:** 5.7 days.

**TIME/ACTION PROFILE (decreased circulating T lymphocytes)**

<table>
<thead>
<tr>
<th>Route</th>
<th>Onset</th>
<th>Peak</th>
<th>Duration</th>
</tr>
</thead>
<tbody>
<tr>
<td>IV</td>
<td>rapid</td>
<td>unknown</td>
<td>unknown</td>
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</tbody>
</table>

**Contraindications/Precautions**

- **High Alert**
- **Contraindicated in:** History of hypersensitivity during previous course of therapy or systemic reaction to skin testing; Hypersensitivity to horse serum protein; Radiation therapy within previous 6 months; Pregnancy; Lactation.

**Skin Test**

**Intradermal:** 0.1 mL of 1:1000 dilution (5 mcg of horse serum).

**Renal Allograft Recipients**

- **IV (Adults):** 10–30 mg/kg/day for 14 days, then every other day for 14 days.
- **IV (Children):** 5–25 mg/kg/day for 14 days, then every other day for 14 days.

**Aplastic Anemia**

- **IV (Adults):** 10–20 mg/kg/day for 8–14 days, then every other day for 21 doses total.

**NURSING IMPLICATIONS**

- **Assessment:**
  - Assess patient for evidence of hypersensitivity reaction (respiratory distress, hypotension, pain in chest, flank, or back) continuously throughout administration. Keep epinephrine, antihistamines, corticosteroids, syringes, and an airway at bedside at all times. If a reaction occurs, stop infusion immediately, administer 0.5 mL aqueous epinephrine 1:1000 IM, administer corticosteroids and supportive measures as needed. Do not resume therapy.
  - Monitor vital signs frequently throughout administration. Medication frequently causes chills, fever, itching, and erythema. Prophylactic administration of antihistamines and corticosteroids usually controls these symptoms.

- **Lab Test Considerations:** Monitor CBC and platelets throughout therapy. May cause leukopenia and thrombocytopenia. Thrombocytopenia is usually transient and does not normally require discontinuation of therapy or transfusion.

**Adverse Reactions/Side Effects**

- **CNS:** Headache.
- **Resp:** Dyspnea.
- **CV:** Chest pain, hypotension.
- **GI:** Diarrhea, nausea, vomiting.
- **Derm:** Dermatologic reactions, erythema, itching.
- **Hemat:** Leukopenia, thrombocytopenia, anemia, hemolysis.
- **Local:** Pain/phlebitis at IV site.
- **Misc:** Allergic reactions including ANAPHYLAXIS, chills, fever, serum sickness-like reactions, chest pain, back pain, joint pain, fever.

**Interactions**

**Drug-Drug:** Concurrent use of corticosteroids and immunosuppressants may mask some adverse reactions.

**Route/Dosage**

- **Skin Test**
  - Intradermal: 0.1 mL of 1:1000 dilution (5 mcg of horse serum).

**Other**

**High Alert**

- **Contraindicated in:** History of hypersensitivity during previous course of therapy or systemic reaction to skin testing; Hypersensitivity to horse serum protein; Hypersensitivity to human serum protein; Radiation therapy within previous 6 months; Pregnancy; Lactation.

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- **Lab Test Considerations:** Monitor CBC and platelets throughout therapy. May cause leukopenia and thrombocytopenia. Thrombocytopenia is usually transient and does not normally require discontinuation of therapy or transfusion.
May also cause hemolysis. Treatment includes transfusion of erythrocytes and administration of mannitol, furosemide, sodium bicarbonate, and fluids, if necessary.

Potential Nursing Diagnoses
Risk for infection (Indications) (Side Effects)
Implementation
● Medications should be used only by physicians experienced in immunosuppressive therapy and management of renal transplant patients and should be administered only in facilities equipped and staffed with adequate laboratory and medical resources.
● Patients with aplastic anemia may need a transfusion of platelets before administration in maintenance to maintain platelets at clinically acceptable level.

Test Dose: Administer an intradermal injection of 0.1 mL of a 1:1000 dilution in 0.9% NaCl and a 0.9% NaCl control. If urticaria or edema >10 mm forms with or without a pseudopod and itching or a marked local swelling occurs, administer infusion with caution. If a systemic reaction (generalized rash, tachycardia, dyspnea, hypotension, anaphylaxis) occurs, do not administer infusion. Allergic reactions may occur in patients with a negative reaction to test dose.

IV Administration
● Interruption: Infusion: Delicate total daily dose in 45% NaCl or 0.9% NaCl. Concentration: Do not exceed 1 mg/mL. Invert IV saline bottle so that undiluted drug does not come in contact with the air inside. May be infused through an in-line filter with a pore size of 0.2–1 micron. Refrigerate diluted solution if prepared before administration. Do not freeze; discard if frozen. Stable for 24 hr, including infusion time, if refrigerated.

Patient/Family Teaching
● Explain the purpose of the medication to the patient.
● Instruct patient to notify health care professional promptly if fever; chills; cough; sore throat; signs of infection; bleeding gums; bruising; petechiae; blood in stools, urine, or emesis; numbness, tingling, or burning pain in hands, arms, legs, feet, or lips; increased fatigue; confusion; disorientation; weakness; dizziness; tachycardia; or hypotension occurs. Caution patient to avoid crowds and persons with known infections.

Why was this drug prescribed for your patient?