Rh(D) IMMUNE GLOBULIN
(arr och oh deh im yoon glob yoo-lee-nin)

Rh(D) immune globulin standard dose IM
HyperRHO S/D Full Dose, RhoGAM

Rh(D) immune globulin microdose IM
HyperRHO S/D Mini-Dose, Mini-Gamulin R

Rh(D) immune globulin IV
WinRho SDF

Rh(D) immune globulin microdose IM, IV
Shigelvac

Classification
Therapeutic: vaccines/immunizing agents
Pharmacologic: immune globulins
Pregnancy Category C

Indications
IM, IV: Administered to Rh(D)-negative patients who have been exposed to Rh(D)-positive blood by: Pregnancy or delivery of a Rh(D)-positive infant, Abortion of a Rh(D)-positive fetus, Fetal-maternal hemorrhage due to amniocentesis, other obstetrical manipulative procedure, or intra-abdominal trauma while carrying a Rh(D)-positive fetus, Transfusion of Rh(D)-positive blood or blood products to a Rh(D)-negative patient. Management of immune thrombocytopenic purpura (ITP).

Action
Prevent production of anti-Rh(D) antibodies in Rh(D)-negative patients who were exposed to Rh(D)-positive blood. Increase platelet counts in patients with ITP. Therapeutic Effects: Prevention of antibody response and hemolytic disease of the newborn (erythroblastosis fetalis) in future pregnancies of women who have conceived a Rh(D)-positive fetus. Prevention of Rh(D) sensitization following transfusion accident. Decreased bleeding in patients with ITP.

Pharmacokinetics
Absorption: Completely absorbed with IV administration. Well absorbed from IM sites.
Distribution: Unknown.
Metabolism and Excretion: Unknown.
Half-Life: approximately 25–30 days.

TIME/ACTION PROFILE (blood levels)
<table>
<thead>
<tr>
<th>ROUTE</th>
<th>ONSET</th>
<th>PEAK</th>
<th>DURATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>IM†</td>
<td>rapid</td>
<td>5–10 days</td>
<td>unknown</td>
</tr>
<tr>
<td>IV†</td>
<td>unknown</td>
<td>2 hr</td>
<td>unknown</td>
</tr>
</tbody>
</table>

†When given for ITP, platelet counts may rise in 1–2 days, peak after 5–7 days, and last for 30 days.

Contraindications/Precautions
Contraindicated in: Prior hypersensitivity reaction to human immune globulin; Rh(D)- or Du-positive patients.
Use Cautiously in: ITP patients with pre-existing anemia (decrease dose if Hgb ≤ 10 g/dL). May also cause disseminated intravascular coagulation in ITP patients.

Adverse Reactions/Side Effects
CNS: dizziness, headache.
CV: hypertension, hypotension.
Derm: rash.
GI: diarrhea, nausea, vomiting.
GU: acute renal failure.
Hemat: ITP — DISSEMINATED INTRAVASCULAR COAGULATION, INTRAVASCULAR HEMOLYSIS, anemia.
MS: arthralgia, myalgia.
Local: pain at injection site.
Misc: fever.

Interactions
Drug-Drug: May decrease antibody response to some live-virus vaccines (measles, mumps, rubella).

Route/Dosage
Rh(D) Immune Globulin (for IM use only)

Following Delivery
IM (Adults): HyperRHO S/D Full Dose, RhoGAM — 1 vial standard dose (300 mcg) within 72 hr of delivery.

Before Delivery
IM (Adults): HyperRHO S/D Full Dose, RhoGAM — 1 vial standard dose (300 mcg) at 26–28 wk.
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Termination of Pregnancy (<13 wk Gestation)

IM (Adults): HyperRHO S/D Mini-Dose, MICRhoGAM—1 vial of microdose (50 mcg) within 72 hr.

Termination of Pregnancy (<13 wk Gestation)

IM (Adults): HyperRHO S/D Full Dose, MICRhoGAM—Volume of Rh-positive blood administered / 5 + number of units of standard dose (1500 IU) preparation (rounded to nearest whole number of units).

Rh (D) Immune Globulin IV (for IM or IV Use)

Following Delivery

IM, IV (Adults): WinRho SDF—600 IU (120 mcg) within 72 hr of delivery. Rhophylac—1500 IU (300 mcg) within 72 hr of delivery.

Prior to Delivery

IM, IV (Adults): WinRho SDF, Rhophylac—1500 IU (300 mcg) at 28 wk; if initiated earlier in pregnancy, repeat q 12 hr.

Following Amniocentesis or Chorionic Villus Sampling

IM, IV (Adults): WinRho SDF (before 34 wk gestation)—1500 IU (300 mcg) immediately; repeat q 12 wk during pregnancy. Rhophylac—1500 IU (300 mcg) within 72 hr of procedure.

Termination of Pregnancy, Amniocentesis, or Any Other Manipulation

IM, IV (Adults): WinRho SDF—600 IU (120 mcg) within 72 hr after event.

Large Fetal-Maternal Hemorrhage/Transfusion Accident

IM (Adults): WinRho SDF—6000 IU (1200 mcg) q 12 hr until total dose is given (total dose determined by amount of blood loss/hemorrhage). IV (Adults): 3000 IU (600 mcg) q 8 hr until total dose is given (total dose determined by amount of blood loss/hemorrhage).

Immune Thrombocytopenic Purpura

IV (Adults and Children): WinRho SDF, Rhophylac—50 mcg (250 IU)/kg initially (if Hgb <10 g/dL, ↓dose to 25-40 mcg [125–200 IU/kg]), further dosing frequency determined by clinical response (range 25–60 mcg [125–300 IU/kg]). Each dose may be given as a single dose or 2 divided doses on separate days.

NURSING IMPLICATIONS

Assessment

- IV: Assess vital signs periodically during therapy in patients receiving IV Rh(D) immune globulin.
- ITP: Monitor patient for signs and symptoms of intravascular hemolysis (IVH) (back pain, shaking chills, fever, hemoglobinuria), anemia, and renal insufficiency. If transfusions are required, use Rh(D)-negative packed red blood cells to prevent exacerbation of IVH.

Lab Test Considerations: Pregnancy: Type and crossmatch of mother and newborn’s cord blood must be performed to determine need for medication. Mother must be Rh(D)-negative and D-negative. Infant must be Rh(D)-positive. If there is doubt regarding infant’s blood type or if either in Rh(D) positive, medication should be given.

- An infant born to a woman treated with Rh(D) immune globulin antepartum may have a weakly positive direct Coombs’ test on cord or infant blood.

- ITP: Monitor platelet counts, RBC counts, hemoglobin, and reticulocyte levels to determine effectiveness of therapy.

Potential Nursing Diagnoses

Deficient knowledge, related to medication regimen (Patient/Family Teaching)

Implementation

- Do not give to infant, to Rh(D)-positive individual, or to Rh(D)-negative individual previously sensitized to the Rh(D) antigen. However, there is no more risk than when given to a woman who is not sensitized. When in doubt, administer Rh(D) immune globulin.
- Do not confuse IM and IV formulations. Rh immune globulin for IV administration is labelled ‘Rh Immune Globulin Intravenous.’ Rh Immune Globulin Intravenous may be given IM; however, Rh Immune Globulin (microdose and standard dose) is for IM use only and cannot be given IV.
- When using prefilled syringes, allow solution to reach room temperature before administration.
- IM: Reconstitute Rh(D) immune globulin for IM use immediately before use with 1.25 mL of 0.9% NaCl. Inject diluent onto inside wall of vial and wet pellet by gentle swirling; do not shake.

CONTINUED
Rh(D) IMMUNE GLOBULIN

- Administer into the deltoid muscle. Dose should be given within 3 hr but may be given up to 72 hr after delivery, miscarriage, abortion, or transfusion.

IV Administration
- pH 6.5–7.5.
- Direct IV: Reconstitute Rh(D) immune globulin IV for IV administration immediately before use with 2.5 mL of 0.9% NaCl. Inject diluent onto inside wall of vial and wet pellet by gently swirling until dissolved. Do not shake. Note: Administer over 3–5 min.

Patient/Family Teaching
- Pregnancy: Explain to patient that the purpose of this medication is to protect future Rh(D)-positive infants.
- ITP: Explain purpose of medication to patient.

Evaluation/Desired Outcomes
- Prevention of erythroblastosis fetalis in future Rh(D)-positive infants.
- Prevention of Rh(D) sensitization following incompatible transfusion.
- Decreased bleeding episodes in patients with ITP.

Why was this drug prescribed for your patient?