antihemophilic factor

Advate, AHF, Alphanate, Boloclot,Factor VIII, Blebutech PS, Blebutech NovoGen,
Bionate-P, DesJet, Kogenate, Kogenate FS, Mironate-P, Rhoferon, Syntha-6

Classification
Therapeutic: Hemostatic agents
Pharmacologic: Blood products

Pregnancy Category C

Indications
Management of hemophilia A associated with a deficiency of factor VIII. Humate-P is used in the management of von Willebrand’s disease that has not responded adequately to desmopressin. Humate-P is used for prevention of excessive bleeding during and after surgery in patients with severe von Willebrand’s disease. Kogenate FS and Recombinate are also used for routine prevention to decrease bleeding and risk of joint damage in children with hemophilia A who have no pre-existing joint damage. Advate is used for routine prophylaxis to prevent or reduce the frequency of bleeding episodes in adults and children with hemophilia A.

Action
An essential clotting factor required for the conversion of prothrombin to thrombin.

Therapeutic Effects:
Correction of deficiency states with resultant decreased bleeding.

Pharmacokinetics

Absorption: After IV administration, absorption is complete.

Distribution: Rapidly cleared from plasma; does not cross the placenta.

Metabolism and Excretion: Used up in the clotting process.

Half-life: 8.4–19.3 hr (reduced in the presence of inhibitor antibodies and during active bleeding).

TIME/ACTION PROFILE (levels of factor VIII)

ROUTE ONSET PEAK DURATION
IV rapid 1–2 hr 8–12 hr

Contraindications/Precautions

Adverse Reactions/Side Effects

Interactions
Drug-Drug: None significant.

Route/Dosage
Recommended doses vary from product to product. Consult individual product information for more specific dosing information. Dose may be calculated using the following formula: Dose AHF (units) = body weight (kg) × desired AHF increase (% normal) × 0.5. Each unit of AHF/kg may be expected to produce a 2% rise in factor VIII levels.

Prevention of Spontaneous Hemorrhage
IV (Adults and Children): 25–40 AHF units/kg (or amount necessary to increase plasma factor VIII levels by 5–30% of normal, depending on situation).

Treatment of Minor Hemorrhage (severe epistaxis, oral mucosal bleeding)
IV (Adults and Children): A single infusion of the amount necessary to increase plasma factor VIII levels by 20–30%. (0.15–0.15 units/kg) every 8–12 hr for 1–2 days; additional antifibrinolytics needed for oral mucosal bleeding.

Treatment of Moderate Hemorrhage (hemarthroses, hematoma/ GI bleeding/reteroperitoneal bleeding)
IV (Adults and Children): 15–25 units/kg (or amount necessary to increase plasma factor VIII levels by 30–50%) every 8–12 hr for 1–2 days; additional antifibrinolytics needed for oral mucosal bleeding.
Treatments of Severe Hemorrhage (trauma with bleeding/intracranial bleeding)

IV (Adults and Children): 50 units/kg (or amount needed to increase plasma factor VIII levels by 100%) every 8–12 hr for 10–14 days postoperatively; longer periods may be required for orthopedic surgery.

Management of Perioperative Hemostasis—Major Surgery

IV (Adults and Children): 50 units/kg or amount necessary to raise plasma factor VIII levels to 100% or amount necessary to raise plasma factor VIII levels to 100% of normal given then 50% of that amount every 8—12 hr to maintain level (a continuous infusion of 3 units/kg/hr may also be used).

Nursing Implications

Assessment

● Monitor BP, pulse, and respirations. If tachycardia occurs, slow or stop infusion rate and notify health care professional.

● Obtain history of current trauma; estimate amount of blood loss.

● Monitor for renewed bleeding every 15–30 min. Immobilize and apply ice to affected areas.

● Monitor intake and output ratios; note color of urine. Notify health care professional if urine becomes red or orange. Patients with types A, B, and AB blood are particularly at risk for hemolytic reactions.

● Assess for allergic reaction (wheezing, hypotension, urticaria, chest tightness, swelling at IV site, nausea and vomiting, itching). Diphenhydramine (Benadryl) may be used as a premedication to prevent acute reactions. Stop infusion, notify health care professional.

● Lab Test Considerations: Monitor plasma factor VIII levels. To prevent spontaneous bleeding, at least 5% of normal factor VIII level must be present.

● Obtain baseline and periodic results of CBC, platelet count, direct Coombs’ test, urinalysis, prothrombin generation test, and partial thromboplastin time (PTT), thromboplastin generation test, and hematocrit and Coombs’ test may indicate hemolytic anemia.

● Monitor coagulation studies before, during, and after therapy to assess effectiveness of therapy.

● Patients with inhibitor levels may not respond or may require 4–5 doses.

Potential Nursing Diagnoses

Ineffective tissue perfusion (Indications)

Risk for injury (Indications)

CONTINUED
antihemophilic factor

Implementation

- Inform all personnel of bleeding tendency. Apply pressure to venipuncture sites for at least 5 min; avoid unnecessary IM injections.
- Dose varies with degree of clotting factor deficit, desired level of clotting factors, and weight.
- Obtain type and crossmatch of blood in case a transfusion is necessary.
- The first dose of AHF is given 1 hr before surgery.

IV Administration

- Direct IV: Administer IV only. Refrigerate concentrate until just before reconstituting. Warm concentrate and diluent (provided by manufacturer) to room temperature before reconstituting. Use plastic syringe for preparation and administration. Use an additional needle as an air vent to the vial when reconstituting. After adding diluent, rotate vial gently until completely dissolved. Solution may vary in color from light yellow to clear with a bluish tint. Do not refrigerate after reconstitution; use within 3 hr. Preparations should be filtered before administration. Monitor patient and check patient’s response. Administer at a rate of 2 mL/min. May be given over up to 30 min.
- Y-site/Additive Incompatibility: Do not admix or administer in the same line with any other medication or solution.

Patient/Family Teaching

- Instruct patient to notify health care professional immediately if bleeding recurs. Advise patient to observe for bleeding in gums, skin, mouth, stools, or emesis.
- Instruct patient in continuous health care professional if they experience lack of clinical response to Factor VIII replacement therapy; may be manifestaion of an inhibitor.
- Caution patient to avoid products containing aspirin or NSAIDs; they may further impair clotting.
- Review prevention of bleeding with patient (use soft toothbrush, avoid IM and subcutaneous injections, avoid potentially traumatic activities).
- Inform newly diagnosed hemophilia patients of the need for hepatitis B vaccine. Advise patient that the risk of hepatitis B transmission may be diminished by the use of heat-treated, pasteurized, solvent/detergent-treated, or monoclonal antibody preparations. Screening programs should also decrease the risk.
- Advise patients to consult health care professional prior to travel. While traveling advise patients to bring an adequate supply of AHF based on their current treatment regimen.
- Advise patient to carry identification describing disease process at all times.
- Why was this drug prescribed for your patient?