REGIONAL ADULT PARENTERAL DRUG MONOGRAPH

GENERIC NAME

deferoxamine mesylate (acute iron toxicity)

Effective Date: Dec 2011

Revised Date: Dec 2022

CLASSIFICATION	OTHER NAMES	PAGE
Antidote for Iron Poisoning **Iron Chelating Agent**	**Desferal** **Desferrioxamine**	1 of 2

ADMINISTRATION POLICY: NOTE: ***For use in chronic overload, refer to deferoxamine chronic iron overload***

IV Infusion – May be administered by a nurse
IV Intermittent - May be administered by a nurse
IM Injection - May be administered by a nurse
IV Bolus – *Not recommended*

RECONSTITUTION/DILUTION/ADMINISTRATION:

Available as: 500 mg vial and 2-gram vial

Vial	Diluent	Diluent Volume	Final Concentration	Final Volume
IV: 500 mg	SWFI*	5 mL	95 mg/mL	5.3 mL
IV: 2 grams	SWFI*	20 mL	95 mg/mL	21.1 mL
IM: 500 mg	SWFI*	2 mL	213 mg/mL	2.3 mL
IM: 2 grams	SWFI*	8 mL	213 mg/mL	9.4 mL

*SWFI = Sterile Water for Injection *Solution appears slightly yellow in colour*

IV intermittent:

Dose	Diluent Volume (usual)	Diluent Volume (range)
1000 mg or less	50 mL	25 to 100 mL
1001 mg or greater	100 mL	50 to 100 mL

IV Infusion: Pump Library:

Drug Library	Dose Rate	Short Name	Care Unit
Yes	mg/kg/h	def6000	General & Critical Care
Drug	**Diluent**	**Final Volume (VTBI)**	**Final Concentration**
6000 mg (63 mL of 95 mg/mL)	100 mL NS	163 mL	36.81 mg/mL
Clinical Advisory:			
Soft Low Dose Limit: 15 mg/kg/h	Soft High Dose Limit: 15 mg/kg/h	Default 15 mg/kg/h	

DOSAGE:

IV (preferred)/IM: Initial 1 gram, may be followed by 500 mg every 4 hours for 2 doses; subsequent doses of 500 mg have been given administered every 4 to 12 hours based on clinical response (maximum recommended dose: 6 grams/day)

IV infusion: For the first 1 gram, infuse ast 15 mg/kg/hour. Subsequent doses may be given over 4 to 12 hours at a rate not to exceed 125 mg/hour (6 grams for serum iron 76 to 275 umol/L, 12 grams for severe iron poisoning for serum iron more than 275 umol/L)

Maximum daily dose: 12 grams

Maximum rate: 15 mg/kg/hour for the first 1000 mg, subsequent doses 125 mg/hour

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STABILITY/COMPATIBILITY:

Stability of reconstituted solution: 3 hours at room temperature
Stability of Final Admixture: 24 hours at room temperature

Compatibility: Compatible with normal saline, D5W, Lactated Ringer

PRECAUTIONS, POTENTIAL ADVERSE REACTIONS:

- Hypotension, tachycardia, flushing, urticaria (especially if given too rapidly), rash, anaphylaxis
- Abdominal pain, diarrhea, nausea, vomiting
- Prior to and during deferoxamine therapy, ensure that the intravascular volume is not depleted. Volume depletion during deferoxamine therapy has been associated with nephrotoxicity

ADDITIONAL NOTES AND NURSING CONSIDERATIONS:

- Several vials may be required dependent on availability
- Rusty orange urine discoloration
- Obtain baseline vital signs and monitor at 15 minutes then as clinically indicated
- Monitor intake and output

Duration of therapy:

- Obtain a fresh urine sample from urinary catheter (not urine reservoir bag) at completion of deferoxamine infusion
- If urinary Fe/Cr ration is greater than 12.5, then an additional course of deferoxamine should be given 24 hours after the initiation of the first course
- Repeat this process daily until the urinary Fe/Cr is less than 12.5
- Rates up to 40 to 50 mg/kg/hour have been given in patients with severe iron intoxication under direction of Poison Control Centre.

NOTE: *The serum iron concentration is not a valid monitoring parameter for the duration of deferoxamine therapy*