



## Bonus Monographs



### Poractant alfa

(poor-ACK-tant AL-fah)

#### CLASSIFICATION(S):

Lung surfactant

**Rx:** Curosurf

#### ACTION/KINETICS

Preterm infants may be deficient in pulmonary surfactant resulting in respiratory distress syndrome (RDS). Poractant, a porcine lung surfactant, compensates for the deficiency and restores surface activity to the lungs. It suppresses the secretion of tumor necrosis factor by resting and through lipopolysaccharide-stimulate human monocytes. Reduces mortality and pneumothoraces due to RDS.

#### USES

Treatment of respiratory distress syndrome (RDS) in premature infants. *Investigational:* RDS prophylaxis; adult RDS due to viral pneumonia; HIV-infected infants with *Pneumocystis carinii* pneumonia; adult RDS following near drowning.

#### SPECIAL CONCERNS

Transient episodes of bradycardia, decreased oxygen saturation, reflux of the drug into the endotracheal tube, hypotension, and airway obstruction have occurred during dosing. If these occur, administration must be interrupted and measures taken to alleviate. After stabilization, dosing may resume with appropriate monitoring.

#### SIDE EFFECTS

**Transient effects:** Bradycardia, hypotension, endotracheal tube blockage,

oxygen desaturation. **Respiratory:** Acquired pneumonia, bronchopulmonary dysplasia, pneumothorax, pulmonary interstitial emphysema. **CV:** **Intracranial hemorrhage**, patent ductus arteriosus. **Miscellaneous:** **Acquired septicemia.**

#### **OD** OVERDOSE MANAGEMENT

*Symptoms:* Effects on respiration, ventilation, or oxygenation. *Treatment:* Aspirate as much of the suspension as possible. Provide supportive treatment, with attention to fluid and electrolyte balance.

#### HOW SUPPLIED

*Suspension, intratracheal:* 1.5 mL (120 mg phospholipids), 3.0 mL (240 mg phospholipids)

#### DOSAGE

##### • SUSPENSION, INTRATRACHEAL

*RDS in premature infants.*

*Initial:* 2.5 mL/kg birth weight. Up to 2 subsequent doses of 1.25 mL/kg birth weight can be given at 12-hr intervals, if needed (i.e., infants who remain intubated and need mechanical ventilation and supplemental oxygen). **Maximum total dose:** 5 mL/kg.

#### NURSING CONSIDERATIONS

##### ADMINISTRATION/STORAGE

1. Slowly withdraw the entire contents of the vial into a 3 or 5 mL plastic syringe through a 20 gauge or larger needle. Attach the pre-cut 8-cm 5 French catheter to the syringe and fill the catheter with the poractant. Discard excess drug through the catheter so that only the total dose to be given remains in the syringe.
2. Administer through the 5 French end-hole catheter (8 cm in length) in-

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serted into the endotracheal tube of the infant. Position the tip distally in the endotracheal tube. Do not extend the catheter tip beyond the distal tip of the endotracheal tube. The endotracheal tube may be suctioned before giving poractant. Allow the infant to stabilize before proceeding with dosing. May also be given through the second lumen of a dual-lumen endotracheal tube without interrupting mechanical ventilation.

3. Give each dose as 2 aliquots, with each aliquot given into 1 of the 2 main bronchi by positioning the infant with either the right or left side dependent.

4. Immediately before drug administration, change the ventilator setting of the infant to a rate of 40–60 breaths/min, inspiratory time 0.5 sec, and supplemental oxygen sufficient to maintain  $\text{SaO}_2$  at  $> 92\%$ .

5. Keep the infant in a neutral position (head and body in alignment without inclination). Briefly disconnect the endotracheal tube from the ventilator. Insert the catheter, as described above, and instill the first aliquot of 1.25 mL/kg birth weight. Position the infant as described above.

6. After the first aliquot is instilled, remove the catheter from the endotracheal tube and manually ventilate the infant with 100% oxygen at a rate of 40–60 breaths/min for 1 min. When the infant is stable, reposition so that the other side is dependent and give the remaining aliquot using the same procedure.

7. After giving the second aliquot, remove the catheter without flushing. Do not suction for 1 hr after drug instillation, unless signs of significant airway obstruction occur.

8. After dosing is completed, resume usual ventilator management and clinical care.

9. Store in a refrigerator at 2–8° C (36–46° F). Unopened vials may be warmed to room temperature for 24 hr prior to use. Do not return warmed vials to the refrigerator more than once.

10. Protect from light and do not shake. Vials are for single use only. Discard any unused drug after opening the vial.

### ASSESSMENT

1. Drug is administered by intratracheal means via catheter into each bronchus.

2. May suction before drug instillation but do not suction for 1 hr after instillation unless extreme airway obstruction evidenced.

3. Observe infant frequently for S&S respiratory distress, hypotension, bradycardia and oxygen desaturation. Correct acidosis, hypotension, anemia, hypoglycemia, and hypothermia before giving poractant.

### OUTCOMES/EVALUATE

- Management of RDS in premature infants
- Restoration of surface activity to lungs
- ↓ Mortality in RDS