SURFACTANT (SURVANTA or BERACTANT)

**DESCRIPTION**
A natural bovine lung extract or pulmonary surfactant (contains protein). It lowers surface tension on alveolar surfaces during respiration and stabilizes the alveoli against collapse at resting transpulmonary pressures. It significantly reduces the mortality due to RDS and air leak complications.

**PHARMACOLOGY**
Survanta contains phospholipids, neutral lipids, fatty acids and surfactant associated proteins B and C, to which colfosceril palmitate (DPPC), palmitic acid and tripalmitin are added. Most of the drug becomes lung-associated within hours of administration, and lipids enter endogenous surfactant pathways of reuse and recycling.

**USE**
1. Respiratory distress syndrome
2. Meconium aspiration syndrome

**PRESENTATION**
8ml/vial suspension

**DOSE**
4ml/kg (100mg of phospholipid/kg) 6-12 hourly up to a maximum of 4 dose. Initiate therapy as soon after the diagnosis of RDS is established.

**ROUTE**
Intratracheal instillation

**ADMINISTRATION**
Before administration, allow to stand in room temperature for 20 minutes or warm in the hand for at least 8 minutes. **ARTIFICIAL WARMING METHODS SHOULD NOT BE USED. DO NOT FILTER OR SHAKE.**

Before administering survanta, assure proper placement of ETT and assess need to suction ETT. Shorten a 5F end-hole catheter (feeding tube) so tip of catheter protrudes just beyond the tip of ET tube above infant’s carina. Slowly withdraw the contents of vial into a plastic syringe through a large (>20 gauge) needle. Attach shortened catheter to syringe. Fill catheter so only dose to be given remains in syringe.

Divide the dose into 4 quarter. Administer each quarter over 2-3 seconds. Wait for 30 seconds or so or until the baby is stable and repeat the next quarter. During instillation of each quarter, baby may need to be disconnected from the ventilator. Alternatively, it can be given via neonatal suction valve without disconnecting from ventilator. Endotracheal tube reflux of the drug is common with second method. The administration of total dose may take 2-3 minutes.

During dosing procedure, ventilator settings may be adjusted at the discretion of the clinician to maintain appropriate oxygenation and ventilation. **Do not suction for at least eight hours after administration unless signs of significant airway obstruction occur.**

**STORAGE**
24 HOURS IN REFRIGERATOR (2-8°C). DO NOT FREEZE.

**MONITORING**
Continuous cardio-respiratory monitoring and SaO₂ in place. Intra-arterial monitoring desirable.
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ADVERSE EFFECT
During administration transient episodes of bradycardias and decreased oxygen saturation can occur. If this occurs, stop dosing procedure and initiate appropriate measures to alleviate condition. Resume dosing once stabilized.
Other transient side effects, although rare, include endotracheal tube reflux or blockage, pallor, vasoconstriction, hypotension, hypertension, hypocarbia, hypercarbia, and apnoea.

INCOMPATABILITY
Not applicable.

REFERENCE