NEWBORN USE ONLY
GIVEN ON DOCTORS ORDER ONLY

NEOSTIGMINE

DESCRIPTION
Acetylcholinesterase inhibitor at neuromuscular junction, allowing accumulation of acetylcholine and restoration muscle activity.

USES
1. Reversal of drug induced muscle paralysis
2. Myasthenia gravis
   About 10-15% of the babies born to myasthenic mothers are affected by transient neonatal myasthenia due to transfer from the maternal circulation of antibodies directed against the acetylcholine receptors of the nerve-muscle junction. Symptoms present within 1-3 days and persist for 3-6 weeks. Symptoms persist for months in the other congenital recessively inherited forms of myasthenia, although they usually become less severe with time.

PREPARATION
2.5mg/ml ampoule

DOSE
1. Reversal of drug induced muscle paralysis
   IV 50mcg/kg Neostigmine and 10mcg/kg Glycopyrronium with Atropine 15 mcg/kg.
2. Myasthenia gravis
   150 mcg IM test dose 30min before feeding.
   Short-term management 150mcg/kg 6-8 hourly is usually used for maintenance, but twice this dose may be necessary every 4 hours. (Oral treatment with puridostigmine can be used once control is achieved.)
   Long-term management 1mg/kg 4 hourly oral pyridostigmine is preferable in the long term management as it has a longer duration of action.

ROUTE
IV infusion, IM injection

RECONSTITUTION
Add 1ml of Neostigmine to 19ml of water for injection to make a 125mcg/ml solution.

ADMINISTRATION
Slow IV bolus injection using the proximal IV bung.

MONITORING
Respiratory and cardiovascular status.

ADVERSE EFFECTS
Muscle weakness, tremors, bradycardia, hypotension, respiratory depression, bronchospasm, diarrhoea, and excessive salivation.

CONTRAINDICATION
1. Intestinal or urinary obstruction
2. Bradycardia or hypotension
3. Use cautiously in patients with bronchospasm or cardiac arrhythmia.
4. Aminoglycoside antibiotics are hazardous in patients with any of the myasthenic disorders because they interfere with neuromuscular transmission causing respiratory depression.

COMPATIBLE DRUGS
Glycopyrronium, heparin, hydrocortisone, netilmicin, pentobarbital, potassium chloride.

REFERENCES