NEURAL TUBE DEFECTS

DEFINITION
Neural tube defects arise from alterations in the closure of the neural tube and in the formation of the vertebrae. There are three main forms and include meningocele, myelomeningocele and myeloschisis.

INCIDENCE
1 in every 1000 births

CLINICAL PRESENTATION (Myleomeningocele)
Protruding sac (containing the spinal cord, nerve roots, meninges and cerebral spinal fluid)
Usually in the lumbosacral area covered with skin or meninges
Fluid may be leaking from partially or completely ruptured sac
Altered tone and activity of the lower extremities
Frog like posture
Dribbling of urine and or faeces
+/- hydrocephalus

NURSING MANAGEMENT
Observe all preliminary standards appropriate to this procedure as outlined in the nursing preface of this manual

- Cover the defect – by circling the torso and defect with a non-adherent dressing i.e. vas gauze and plastic wrap. The defect must be kept sterile and free from faecal or urine contamination
- Observe the sac - for exact site, size, skin covering, rupture of sac, sign of infection
- Position- nurse the infant prone or in the lateral position to reduce tension on the defect. A roll between the legs at hip level assists in maintaining abduction of the legs. A foot roll is used to maintain the feet in a neutral position
- Monitor blood glucose – see hypoglycaemia
- Antibiotics – administration of broad spectrum antibiotics as ordered
- Thermoregulation – prevent hypothermia by wrapping the defect with plastic wrap (see cover the defect) and implement thermal management strategies to minimise heat loss, including hats, dressing and nestling techniques
- Fluid resuscitation – give intravenous or enteral fluids as ordered
- Head - assess shape, tension of fontanelle, separation of sutures and measure occipito frontal circumference
- Movement – observe tone and spontaneous movement of lower extremities
- Comfort measures -
- Parents – give adequate explanation and support. Encourage parents to express their anxieties and feelings towards their infant. Involve parents in their infants care when they are ready
- Preparation for transport if required – see transfer of infant