



Knowledge is the key to a better life!



Guidelines for the Management of Hydrocephalus and Spina Bifida in District Hospitals

1. How to treat a newborn baby with Spina Bifida

- If the Cele has an open wound, cover it with clean or sterile gauze, wash once or twice daily with Normal Saline and change the dressing whenever it is soiled with stool or urine in between.
- Treat every child who is born with open Spina Bifida with Antibiotics for neonatal meningitis until the Cele wound is clean and dry (Antibiotics recommended: Ampicillin 200 mg/kg/day in 2 divided doses, Gentamycin 5 mg/kg/day in 2 doses +/- Cloxacillin 100 mg/kg/day in 2 doses).
- A child with Spina Bifida with fever and convulsions and/or loss of consciousness needs treatment for meningitis.

2. Follow up of Spina Bifida patients at District Level

? Development of Hydrocephalus

- Convulsions
- Bulging of the fontanel, increasing headcircumference
- Other signs of raised ICP.
- Measure the HC monthly in children less than 6 months, 2 monthly in older children. Monthly measurements necessary after closure of the back.

? Urological problems / Incontinence

- Check for urinary tract infections at times of fever and in between.
- Cloudiness of urine in a glass is a reliable method of detecting UTI in the absence of a Laboratory.
- IF a UTI is suspected or proven, treat with Cotrimoxazole OR Nitrofurantoin OR according to Urine culture results.
- Check if on antibiotic prophylaxis or meant to be doing clean intermittent catheterisation.
- If a child with Spina Bifida is not in a regular follow up program for neurogenic bladder and bowel problems, refer to a centre where the service is offered.

? Constipation / Stool incontinence

- Teach mothers how to empty the bowel every day at the same time, if necessary with manual evacuation.
- Encourage teaching on good eating eg fruit, drinking plenty and activity to decrease constipation.
- Use enemas if necessary: after an enema the patient is usually clean and dry for some time.

? Pressure Sores

- Remove braces



- Check total skin, esp. in lower limbs and buttocks for sores.

3. When to refer patients with Spina Bifida

- All children with spina bifida should be referred early (after the first visit) for assessment of the skin covering the back, orthopedic treatment of foot malposition if present (ex:club feet), urological assessment (including renal ultrasound) and assessment of hydrocephalus. Refer to the nearest centre able to manage these things.

Other reasons for referral:

- Head circumference increasing rapidly
- If child has a shunt and you suspect shunt blockage
- If shunt infection is suspected
- If spina bifida is increasing in size and the skin is becoming very thin, therefore, in danger of rupture.
- If the open back is infected and you suspect meningitis
- If the child presents with an inspiratory stridor, think of the Arnold Chiari Malformation and refer the child most urgently. These children need shunts or shunt revision urgently.
- If the child loses previously gained milestones
- If there are repeated urinary tract infections and the child is not on catheter treatment or prophylaxis

4. Who gets Folic Acid Prophylaxis?

- Any woman who is planning a pregnancy would benefit from Folic Acid increments.
- Any woman at higher risk of delivering a child with spina bifida like:
 - Those with a family history of spina bifida/spina bifida occulta in husband or themselves
 - Those who already have a child with spina bifida
 - All women on antiepileptic drugs (all are teratogenic!)
- **Start** Folic Acid 5 mg / day at least 4 weeks before conceiving
- **Continue** Folic Acid until the end of the first trimester
- But it does no harm to continue until the end of pregnancy

These Guidelines were prepared by the participants of the 12th CPEP-Seminar at KCMC, September 2000 under coordination of Dr M. Oneko, c/o KCMC, Paediatric Department and Dr M. Nicol, CCBRT, Dar es Salaam.