**SPINA BIFIDA**

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**This is a congenital disorder in which the two halves of the posterior vertebral arch fail to fuse at one or more levels. This neural tube defect or spinal dysraphism, which occurs within the first month of foetal life, usually affects the lumbar or lumbosacral segments of the spine. In its most severe form, the condition is associated with major neurological problems in the lower limbs together with incontinence.**

**PATHOLOGY:**

**Spina bifida occulta.**

* **Mild forms of dysraphism. (incomplete fusion)**
* **Midline defect between the laminae and nothing more hence the term occulta.**
* **Affects L5**
* **Dimple, a pit or tuft of hair on the skin of the spine. CAN BE DISCOVERED BY X-rays.**

**Spina bifida cystica.**

**More overt forms of dysraphism, the vertebral laminae are missing and the contents of the vertebral canal prolapse through the defect.**

**The least disabling is meningocele which accounts for about 5% of cases of spina bifida cystica.**

**The spinal cord and nerve roots remain inside the vertebral canal and there is usually no neurological abnormality.**

**Myelomeningocele:**

 **Most serious.**

 **Occurs in the lower thoracic spine or the lumbosacral region.**

 **Part of the spinal cord and nerve roots prolapse into the meningeal sac.**

**TYPES-------Closed myelomeningocele and open myelomeningocele is always associated with a neurological deficit distal to the level of the lesion.**

**May be infected leading to more severe abnormality and even death because it is exposed to the air. Prone to infection.**

**Hydrocephalus:**

**The defects interfere with CSF circulation causing obstruction leading to hydrocephalus. The skull enlarges by separation of cranial sutures. Persistently raised intra-cranial pressure may cause cerebral atrophy and learning difficulties.**

**INCIDENCE AND SCREENING.**

 **2 to 3 per 1000 live births.**

**Risk of future siblings is significantly higher.**

**Folic acid 400mg daily in ANC reduces the risk of neural tube defects in the fetus.**

**CLINICAL FEATURES.**

**Early diagnosis**

 **The major neural tube defects can easily be detected on antenatal scans or identified immediately after birth.**

**Dimple, tuft of hair or pigmentation over the skin of the back (lower L/S).**

**Mild neurological symptoms:**

* **Enuresis**
* **Urinary frequency or intermittent incontinence.**
* **Weakness of lower limbs**
* **Loss of sensibility**
* **Bulging of contents on the skin with thin membrane.**
* **Hydrocephalus may be present at birth.**
* **Paralysis of the lower limbs in severe forms.**

**INVESTIGATIONS.**

 **Plain X-rays**

 **CT scans**

 **MRI**

**TREATMENT.**

**1.Surgery and correction within 48 hours.**

**2.Dress the wound at birth and cover with sterile gauze.**

**REGIONAL SURVEY.**

**1.Spine**

 **Corrections of scoliosis and kyphosis**

**2. Hip**

 **Disorders can be corrected with calipers**

**3. Knee.**

 **Correction as need arises**

**4. Foot.**

 **Many present with foot deformities. Issues of Talipes can be corrected.**

 **Appropriate correction as per deformity.**