

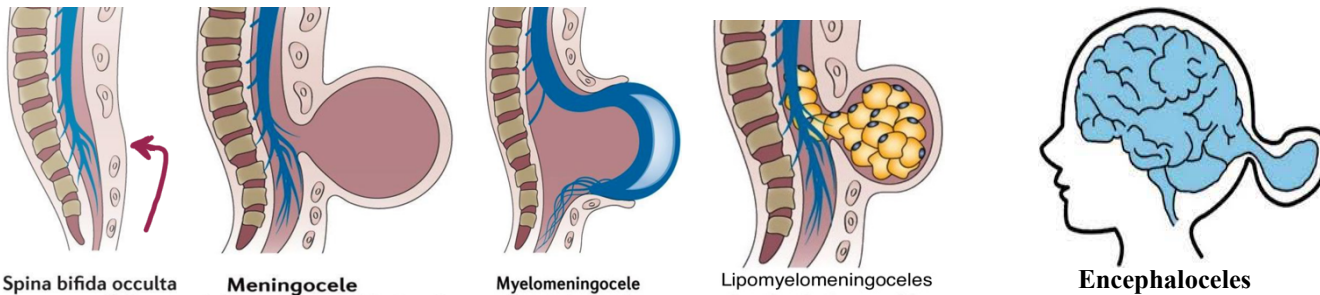
## SPINAL & CRANIAL DYSRAPHISM

- Failure of Neural tube to form, or mesoderm & ectoderm to meet ► dysraphism “defective fusion”
- The degree of failure of union in these layers will determine the severity of the congenital defect ► mild-severe
- It will be found in the midline of the body “raphe” ► back / nape of the neck / roof of the pharynx / at bregma

### Types

1. **Spina bifida occulta** >> no defect on the surface of the body, defects in the spinous process or laminae on imaging.
2. **Spina bifida aperta** >> u can detect an anomaly on the surface of the skin.
  - a) **Meningocele**: Dura filled with CSF, No actual nervous tissue ► cystic swelling on the back, no NDs
  - b) **Myelomeningocele**: With nervous tissue, herniating into the sac (cord +/- roots) ► with NDs

— Severe types : dura totally opened to outside, central canal is opened, CSF is pouring out... 80% will develop hydrocephalus
3. **Encephaloceles** >> same as above, but related to skull & Brain ► appears at the bregma/ as polyps in nasopharynx



### Risk .F

familial genetic causes / nutritional causes like folate deficiencies \ antiepileptic drugs / marrying into close family.

### Treatment:

- Arnold-Chiari type 2 malformation

- 1- Admitted pt, deal with neural defect within 24-48 hrs
- 2- Put him on abdomen , cover the defect with gauze / saline /+ abx if ruptured
- 3- Examine the baby , neurological exam , power, reflexes, anus tone, ventricular size, look for Renal(PCD) or CVS or skeletal anomalies, club feet. ~ Arnold chiari-2 Malformation
- 4- Surgical : close the defect within 48 hrs

**In meningoceles** >> Excise the sac , repair the dura, cover the defect site by layer of lunar fascia

**In myelomeningocele.** >> make the dura and nervous elements free, support the dura by lumbar fascia

— Now it can be done intrauterine ... to avoid rupture & contamination

— In case of **hydrocephalus** ... u can lower the CSF pressure by using a **shunt** before the surgery... prevent CSF leak post op