EU-Ukraine Webinar Series on Spinal Dysraphisms

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Questions

Session 3: Etiology, epidemiology, pathophysiology, classification of SBoD, & neurosurgical management

Responses by

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Session 3 Q&A / Сесія 3 Питання та відповіді

- How often are dura mater plastics used in neurorachisitis and why?
  - Duroplasty with plastic material is usually used to reduce the risk of adhesive scar , and then clinical retethering syndrome.
  - In prenatal surgery often used between placode and dural closure.
  - In post natal used usually for reoperation.

- Do they practice simultaneous surgery for Spina bifida and hydrocephalus, if such combinations occur?
  - Both surgery are rarely done at the same time because of increasing shunt infection risk.
  - Basically, closure is done at first and then Shunting in case of necessity in the next weeks or months.
  - Shunting first can be decided in severe cases with already antenatal hydrocephalus and large skin defect.

Session 3 Q&A / Сесія 3 Питання та відповіді

- Do primary and secondary (after closure of spina bifida) tethering syndrome are operated on; is intraoperative neuroelectromonitoring used during this and, in general, how often is this method of navigation used?
  - Tethered cord syndrome is the clinical presentation of the mechanical suffering of a spinal cord. It can be operated of course in the case of spinal dysraphism. The question of a re-surgery for recurrence or worsening of symptoms can appear.
  - In both cases neuromonitoring is a help for mapping the malformative situation and detection of electrophysiologic modification that can lead to new neurologic impairment.
  - This method is more and more often used, but depending on the center experience , complexity of the case and the clinical situation its utility is various.
  - In Bambino Gesu, the IONM is essential for any spinal dysraphism. We rarely applied it even in myelomeningoceles (postnatal treatment).

Session 3 Q&A / Сесія 3 Питання та відповіді

- If shunting, which systems are preferred and why, compared to others?
  - Choice of shunting is the same in case of spina bifida or other etiologies.
  - The goals are: effective drainage, slit ventricle prevention, long term functioning.
  - In Bambino Gesu, we use adjustable valves, but in rare cases, we have used flow-regulating valves.

- Do you think there are new health benefits from the fetal surgery of myelomeningocele from a urological viewpoint?
  - There is no direct effective effect on the malformative conus itself to avoid urological symptoms in myelomeningocele.
  - Reducing the shunt necessity can reduce the potential complication of urological surgery such as enterocystoplasty, improving the autonomy of the patient can improve the management of symptoms.
  - Indeed, we don't present the prenatal closure as a procedure to improve the urological point of view.

Session 3 Q&A / Сесія 3 Питання та відповіді

- From the technical view of the repair of myelo, are there different outcomes depending on the surgical technique?
  - Compared to open surgery fetoscopy present a long learning curve to achieve the same quality of multilayer closure.
  - For myeloschisis the closure can be more difficult with fetoscopy, compared to myelomeningocele.
  - The outcome depend mainly on the watertight closure, the non adhesive closure , the dermoid inclusion closure and of course prematurity as a major risk of prenatal surgery and major outcome factor.

- Why has fetal surgery not changed the urological prognosis in myelo fetal surgery?
  - Probably because of terminal spina cord dysplasia that explain mainly the urological prognosis .
  - We don’t know yet the long-term prognosis at older adult age.