Acute Flaccid Paralysis in Young Children – “Watch their back”

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Introduction

Congenital Dermal Sinus(CDS) is a congenital malformation, that may be associated with a sinus tract between the skin and deeper tissues, and sometimes the spinal cord.

Methods

Data of all children with flaccid paralysis (AFP) presenting to our center during the period January 2016 to May 2017 were reviewed. Data on investigations and clinical follow-up was recorded.

Clinical and Neuro-Imaging

Results

- ❑ 111 children of AFP during the study period
- ❑ Six children - spinal abscess + dermal sinus
- ❑ The median age - 8.5 months
- ❑ Median duration of symptoms - 33 days
- ❑ Spinal cord infection kept as an initial differential diagnosis - Nil
- ❑ All children had motor improvement after treatment but, were left with significant deficits and residual neurogenic bladder.

Conclusions

- ❑ The infection of the spinal cord and meninges due to a dermal sinus is a cause of AFP
- ❑ It **can present without fever**.
- ❑ In any child with flaccid paralysis, a **careful examination of back** for dermal sinus is critical to suspect this diagnosis.
- ❑ Residual Neurodeficits were significantly more than western data.

References

- ❑ Muniz Bernardo Carvalho, Ribeiro Bruno Niemeyer de Freitas, Mufarrej Gabriel, Wilner Nina Ventura, Gasparetto Emerson Leandro. Cervical spinal dermal sinus associated with intramedullary spinal cord abscess. Arq. Neuro-Psiquiatr.. 2017 ; 75: 133-133
- ❑ Shukla D, Gangadharan J, Devi BI, Ambekar S. Tuberculous spinal subdural abscess in an infant with dermal sinus. Neurol India 2012;60:236-7

Table 1: Profile of six children with AFP due to dermal sinus

Case no.	1	2	3	4	5	6
Age	9 months	8 months	16 months	8 months	10 months	10 years
Presentation	Fever, Left leg paresis, Dribbling	Paraparesis	Paraparesis, Dribbling	Paraparesis	Fever and paraparesis	Paraparesis
Duration of symptoms	1 month	2 days	1.5 months	2 weeks	1.5 months	3 years*
Spine Involvement	Holocord	T5-Conus	T7-Conus	T11-S3	T10-Conus	T5-Conus
Organism (CSF)	None	E. coli	E. coli, P. aeruginosa	None	None	Not Investigated
Surgical Drainage	Yes	No	Yes	Yes	Yes	Not willing
Outcome	Monoparesis, Bladder incontinence	Paraparesis, Bladder incontinence	Paraparesis, Bladder incontinence	Paraparesis	Paraparesis, Bladder Incontinence	Lost to follow up

* - Duration of neurological symptoms. Spinal abscess with dermal sinus was detected incidentally