

IDIOPATHIC SYRINGOMYELIA- ALDER HEY EXPERIENCE

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CONFLICT OF INTEREST DISCLOSURE

- ***Grants/research support- none***
- ***Consultant- none***
- ***Stock/shareholder- none***
- ***Royalties- none***
- ***Other financial support- none***
- ***Employee- none***



IDIOPATHIC SYRINGOMYELIA

- **No identifiable underlying cause like Chiari, tumor, trauma. etc.**
- **Underlying pathologies discovered till date-**
 - difficult labour*
 - arachnoid webs, pouches, cyst**
 - small posterior fossa [Chiari O]***
 - abnormal CSF flow dynamics****

*Bernard Williams. Difficult labour as a cause of communicating syringomyelia. **The Lancet**, Volume 310, Issue 8028, Pages 51 - 53, 9 July 1977.

Mallucci CL et al. Idiopathic syringomyelia and importance of occult arachnoid webs, pouchs and cysts. **Br J Neurosurg 1997;11:306-309

***Tubbs RS et al. Analysis of posterior fossa in children with the Chiari O malformation. **Neurosurgery** 2001;48:1050-1054

****Struck AF, Houghton VM. Idiopathic syringomyelia: phase Contrast MR CSF flow dyanamics at level of formen magnum. **Radiology**, October 2009 ; 253:184-190



IDIOPATHIC SYRINGOMYELIA OUR STUDY

Even with increasing number of cases of idiopathic syringomyelia being reported,

knowledge about its natural course remains unclear

&

there is a lack of common consensus regarding treatment and follow-up requirements.

- ***Retrospective and prospective analysis***
- ***30 cases*** of Idiopathic syringomyelia from our database (2000-2011).
- ***Largest study group to date.***
- ***Assessment of***
 - records,
 - clinical symptoms,
 - response to any treatment given and
 - serial MRI imaging at regular intervals (appx 1yr) has been performed for each patient.
 - Avg. follow up- 4yrs

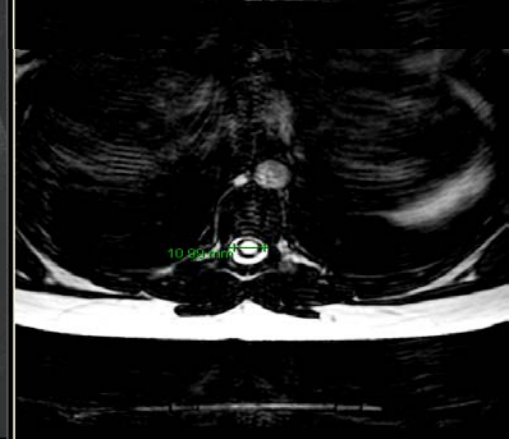
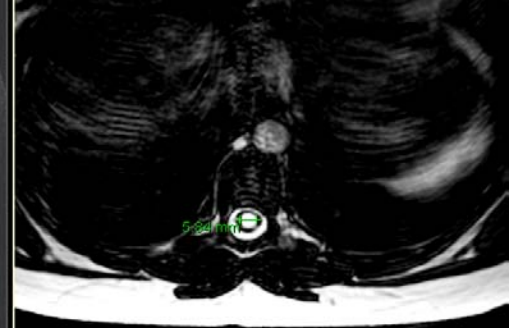
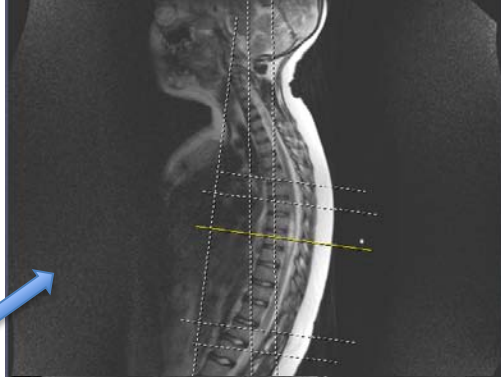


- **Measurements- on MRI**

1. **Length x width of syrinx-
T2W sag**

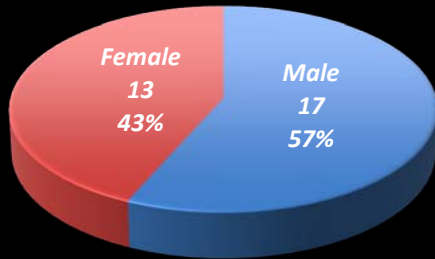
2. **Syrinx length/vertebral
body height ratio (SL/VB)-
T2W sag**

3. **Max syrinx dia/ Spinal
cord dia ratio (SD/SpD)-
T2W axial**



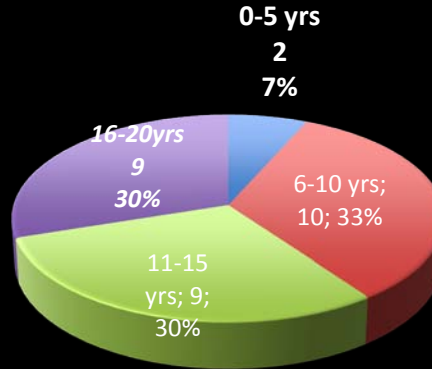
OBSERVATIONS

SEX DISTRIBUTION



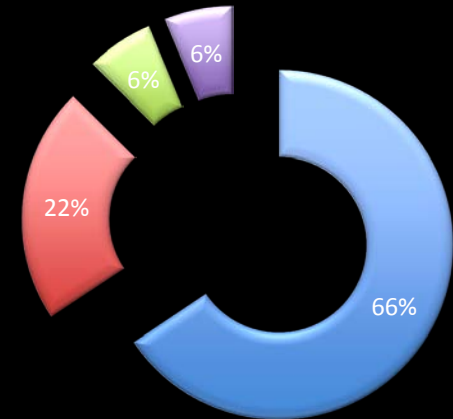
AGE DISTRIBUTION

3yrs-18yrs

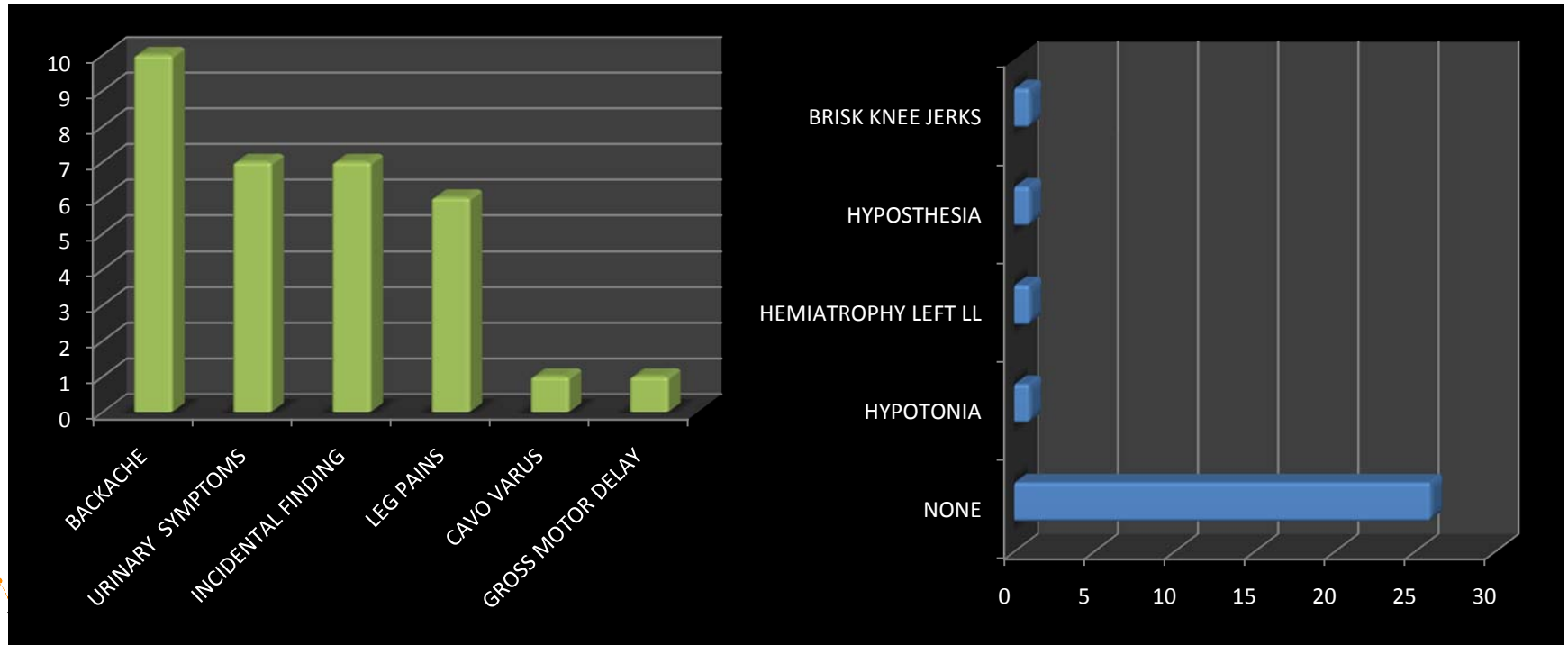


LOCATION

■ THORACIC ■ CERVICAL ■ C5-CONUS ■ CONUS

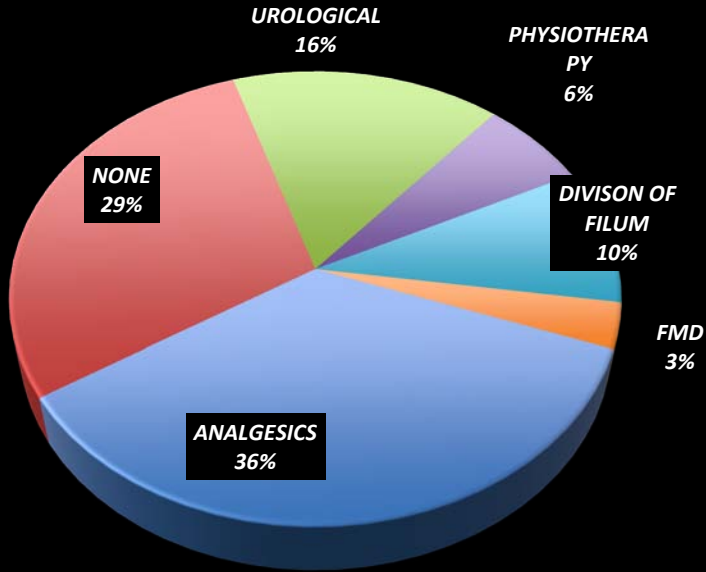


OBSERVATIONS



TREATMENT

SURGICAL GROUP

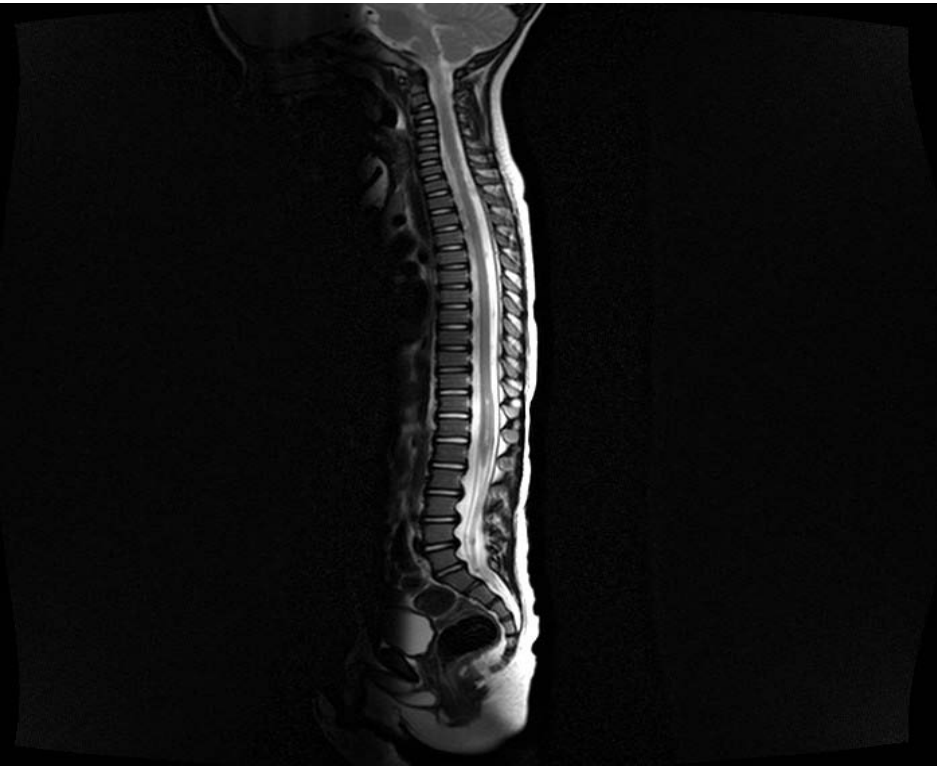


Location	P. complaints	Clinical signs	Size	MRI	Surgery	Outcome	Post Op size	Sy dia/Sp dia ratio
C6-C7	Backache, leg pain, frequency	None	32 x 2	Normal position Conus M	FT Division	Clinical improvement	resolved	0.2 0
Conus	Urgency, frequency, backache	None	27 x 1.5	Normal position Conus M	FT division	Clinical improvement	27 x 1.5	0.2 0.15
T10-L1	Incidental MRI finding	None	26.5 x 3-42 x 5	Normal position Conus M	FT Division	Under follow up		0.4-0.6 Post-op MRI awaited
C4-T8	Backache, Urgency	Hypoesthesia L/L	164 x 12	Crowding of PF	FMD	Clinical improvement	154 x 5	0.7 0.58

FT DIVISION

Pre-op

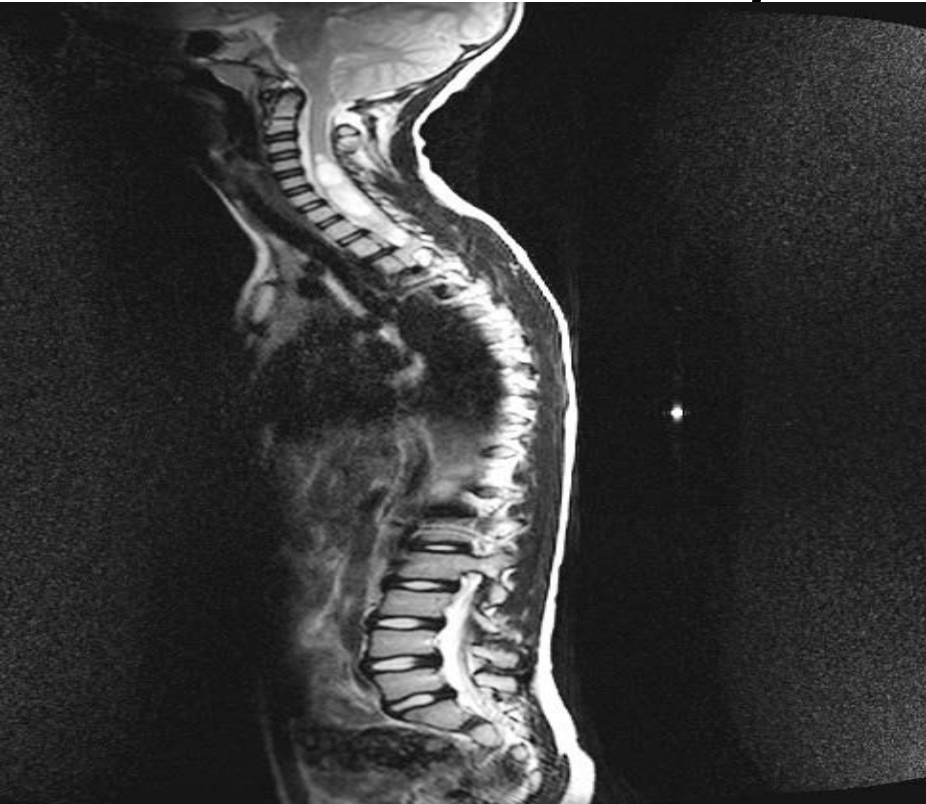
Post-op



FMD

Pre op

Post op



RESULTS

- **1. No change in SD/SpD ratio- 18**

*Symptomatic improvement-14
(77.7%)*

No change- 4 (22%)

- **2. Increased SD/ SpD ratio- 2**

Deterioration- 1 (50%)

No change- 1 (50%)

- **3. Decreased SD/SpD- 10**

Symptomatic improvement- 9 (90%)

No change- 1 (10%)

- **DECREASED SD/SpD RATIO GROUP-**

- *Avg. Follow up- 5 yrs*

- *Avg. decr. in ratio- 0.1*

- *90% (9/10) showed clinical improvement*

- *3 patients received surgical treatment-*

FMD- 1

FT division- 2

- *60% (6/10) showed no change in syrx size*



CONCLUSION

- *We believe that group of truly idiopathic syringomyelia is shrinking.*
- *“Treat the patient, not the scan” - Consider division of F T if symptoms fit even if scans may not.*
- *Early, pre-pubertal FT division/FMD should be considered esp. in patients with scoliosis*
- *Size of syrinx may not be the only radiological parameter to guide treatment and follow-up.*
- *Follow up may only be required until SD / SpD ratio decreases or symptoms improve.*
- *There is a need for further Large multi-institutional prospective studies.*



THANKYOU

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