Acute Transverse Myelitis Progressing to Spinal Cord Atrophy. A Case Report

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Introduction

Acute transverse myelitis (ATM), usually presents with lower limb weakness, back pain, and sphincter disturbances in childhood.

Magnetic Resonance Imaging (MRI) commonly shows enlargement and abnormal signal of the spinal cord. When spinal cord atrophy appears during the disease course, the outcome becomes unfavourable. Spinal cord atrophy following ATM in children is uncommon.

We report a 9 year old girl with spinal cord atrophy following acute transverse myelitis and no motor recovery occurred.

The Case

The patient presented at 7 years old for acute lower limb weakness which quickly progresses to inability to move or feel both legs. She also had urinary incontinence and was not able to sense defecation. There was no history of trauma or previous illness.

Urgent MRI spine (2018) showed expansion of the cord with increased T2 signal at mid thoracic levels (**Figure A**). These lesions appear isointense on T1 and show no enhancement post IV gadolinium. Based on the clinical presentation and MRI findings, a diagnosis of **acute transverse myelitis** was made.

She had courses of IV Methylprednisolone, plasmapheresis and IV Immunoglobulin therapy which all failed to show any improvement. Nerve conduction study is consistent with axonal motor neuropathy.

Follow-up MRI spine (2020) shows atrophy of the spinal cord from T11 (**Figures B & C**).

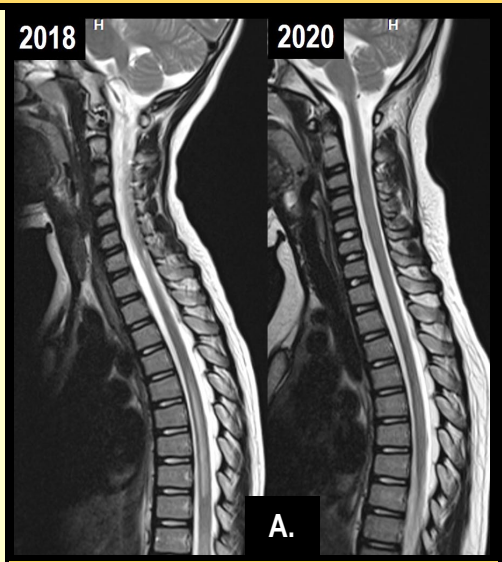
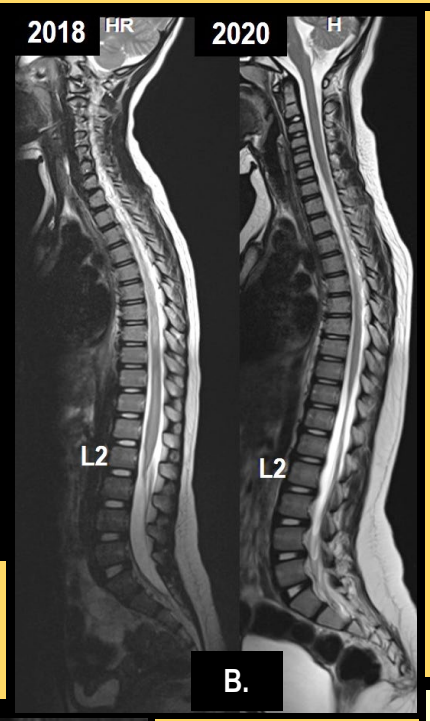
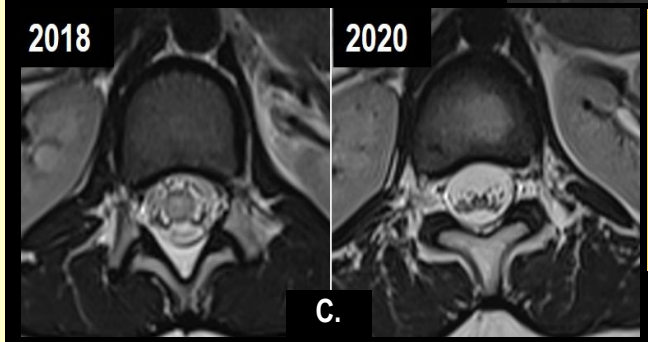


Figure A.
Sagittal T2 - hyperintense lesion at T5 – T9 with slight cord expansion which resolved in the follow-up scan (2020)





Figures B & C.
Sagittal & axial (about same level), comparing the size of the distal cord which has become thinned from the level of T11 downwards in keeping with cord atrophy

Conclusion

- Spinal cord atrophy must be considered if a pediatric patient with inflammatory spinal cord lesion does not show motor recovery.
- Spinal cord atrophy on MRI suggests an indicator of poor prognosis in pediatric patients previously diagnosed to have transverse myelitis.

References

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"I have no potential conflicts of interest to report with regards to this presentation"