

# Symptoms of Hypermobility Syndromes May Mimic Multiple Sclerosis

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# Hypermobility Syndromes

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Hypermobility Spectrum Disorder (M35.7) and Ehlers Danlos Syndrome (Q79.6)

Diagnosed by a Beighton Score

Associated with:

- Autoimmune Disease
- Headache
- Joint Pain
- Fatigue / Sleep Problems
- Dysautonomia
- Cardiac Abnormalities

# Patient Cohort

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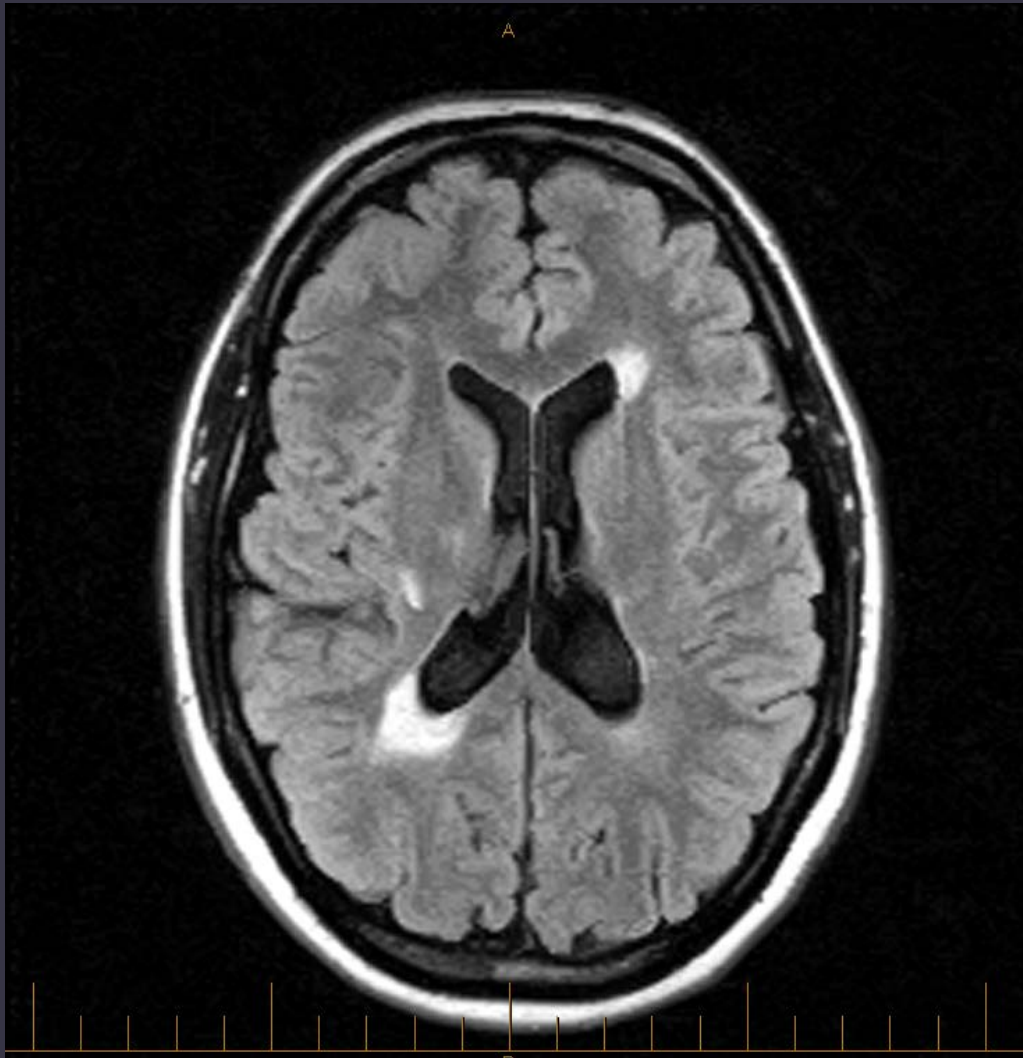
475 Patients with Hypermobility from 1/6/2016-4/4/18

49 patients had abnormal Brain MRIs indicating White Matter Lesions

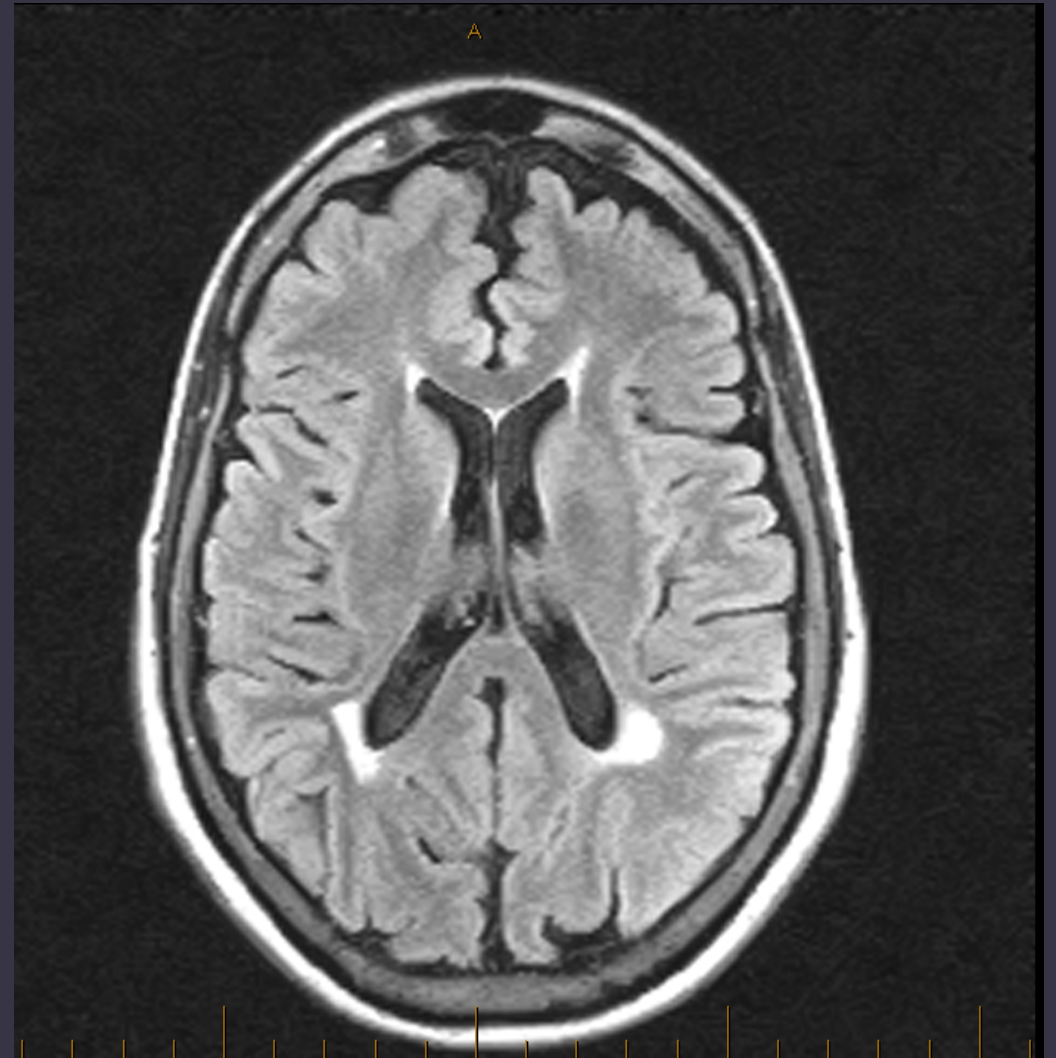
- 19 Patients were either misdiagnosed with MS or referred to us because of MS

# Characteristics of Hypermobile Patients with White Matter Abnormalities

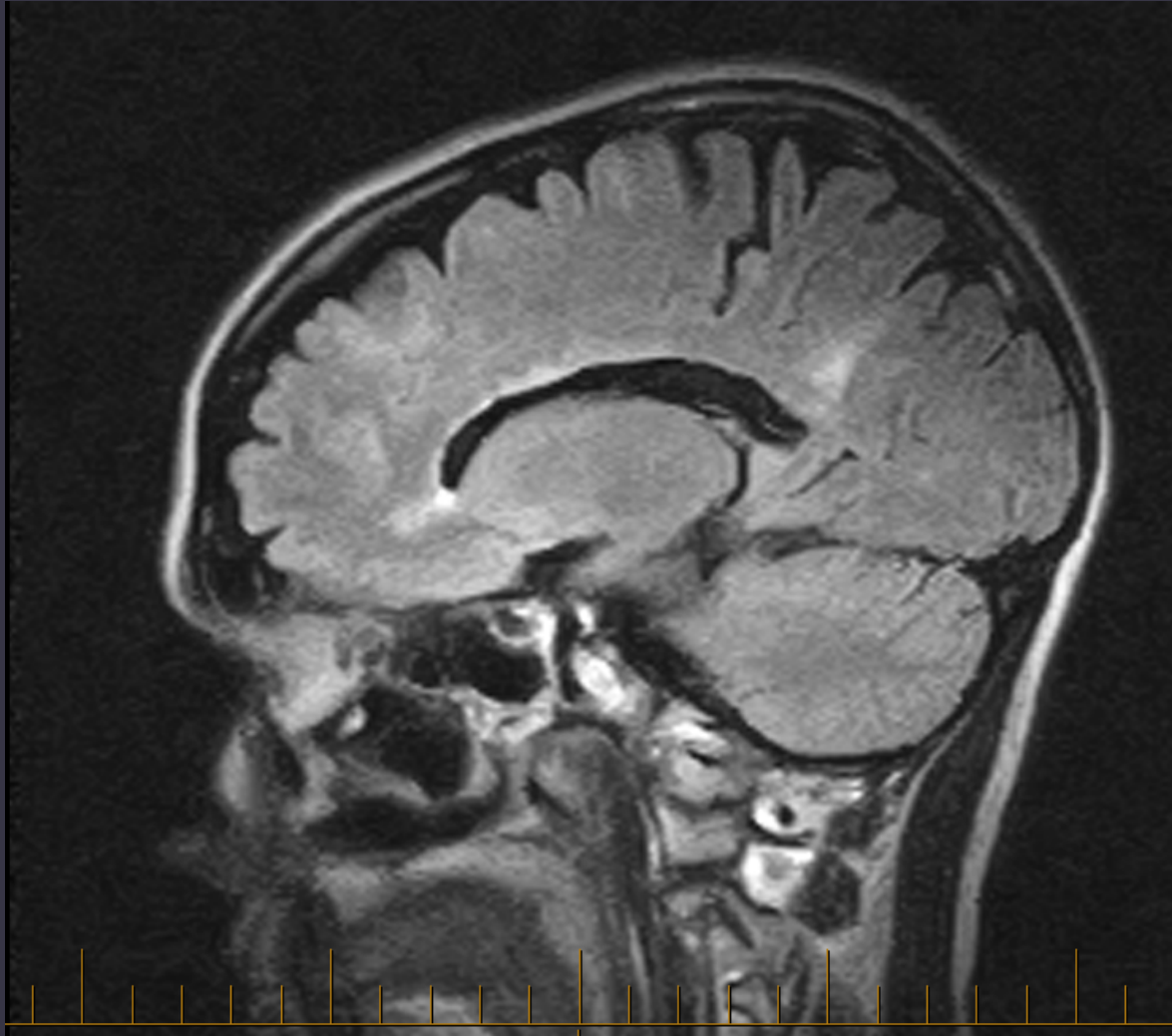
		Patients Misdiagnosed with MS		Patients with No MS Diagnosis		Total	
<b>N</b>		19	38.77%	30	61.22%	49	100.00%
<b>Age</b>		44.0 (± 8.4)		45 (± 12.6)		45 (±11.1)	
<b>BMI</b>		29.0 (± 7.4)		29.2 (± 7.9)		29.1 (± 8)	
<b>Years Since MS Diagnosis</b>		8.8 (1-37)					
			<b>% Misdiagnosed with MS</b>		<b>% No MS Diagnosis</b>		<b>% of Total</b>
<b>Dysautonomia</b>		8	42.11%	16	53.33%	24	48.98%
<b>Dizziness</b>		5	26.32%	11	36.67%	16	32.65%
<b>Fatigue</b>		17	89.47%	26	86.67%	43	87.76%
<b>Memory</b>		2	11%	5	16.67%	7	14.29%
<b>Paresthesia</b>		13	68.42%	3	43.33%	26	53.06%
<b>Visual Disturbance</b>		9	47.37%	16	53.33%	25	51.02%
<b>Muscle Weakness</b>		8	42.11%	16	53.33%	24	48.98%



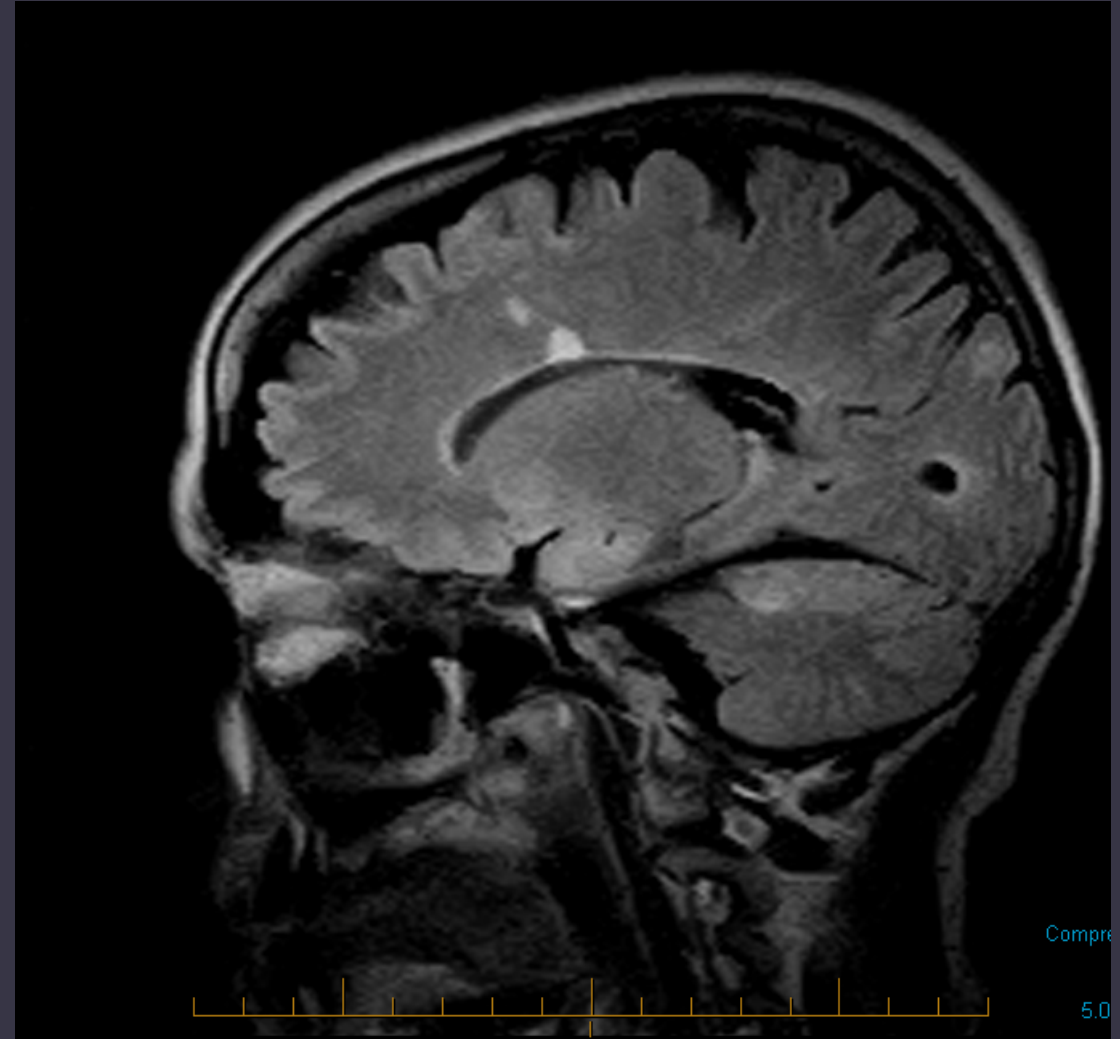
T2 Flair with Contrast of Patient with MS



T2 Flair with contrast of Patient Misdiagnosed with MS



Sagittal Flair with Contrast of Patient with MS



Sagittal Flair with Contrast of Patient Misdiagnosed with MS

# Ruling out Multiple Sclerosis

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## Clinical Correlation Included

- Diagnostic Testing
- Lab work
- CSF Studies
- Family History
- Clinical Disease Progression and Course

# Conclusions

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Patients with Hypermobility Syndromes share similar symptoms to MS patients

White Matter Lesions can be seen on MRI in similar locations as MS patients

Since both the MRI findings and symptoms overlap in MS and Hypermobility Syndromes, Hypermobility Syndromes can be mistaken for MS

When evaluating a patient for MS, Hypermobility Syndromes should be considered in the differential diagnosis.



# References

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Any Questions?