

# Treatment of Idiopathic Relapsing Transverse Myelitis

Elizabeth M. R. Dragan, MD, George J. Hutton, MD

Baylor College of Medicine, Department of Neurology, Houston, TX

## INTRODUCTION

There is very little literature to date regarding incidence and even less regarding the treatment of idiopathic relapsing transverse myelitis (TM).<sup>1-3</sup> One study suggests that only 9.4% of all cases of TM are idiopathic relapsing.<sup>2</sup> Another study found that 24.4% of idiopathic TM were relapsing.<sup>3</sup> Because the entity is so rare, there are no clinical trials evaluating treatment. In fact, to date, there are few published case reports or case series discussing the long-term outcomes in patients with idiopathic relapsing TM.

## METHODS

Retrospective chart review of all cases of transverse myelitis (TM) referred to the Maxine Mesinger Multiple Sclerosis Clinic at Baylor College of Medicine from February 2009 to July 2012. Patients with relapsing transverse myelitis due to multiple sclerosis, neuromyelitis optica, systemic inflammatory disorders/autoimmune disorders (SLE, Behçet's Sjögren's, sarcoidosis, mixed connective tissue disorders) or infectious (Lyme, HIV, HTLV-1, Mycoplasma, VZV, CMV, EBV, HHV-6, enterovirus, syphilis) causes were excluded. Those deemed to be idiopathic relapsing, as defined by radiologic findings and clinical presentation, were reviewed for number of relapses prior to and after treatment.

## RESULTS

Of the 73 cases of transverse myelitis referred, 10 (13.7%) were found to be idiopathic relapsing, after other causes were ruled out. The average age of first event of TM was 45.7 years. The annualized relapse rate (ARR) prior to initiation of treatment was 2.23. After the initiation of appropriate therapy, the ARR was 0.06 ( $p = 0.005$ ). Of these 10 patients, only one has declined treatment. Two are no longer on treatment after being stable on cyclophosphamide for one and azathioprine for the other. Of the remaining 7 patients, 6 were treated with azathioprine (one had a relapse on treatment) and one with mycophenolate mofetil due to increased LFTs on azathioprine. Of the patients on azathioprine, one had previously failed cyclophosphamide.

## CONCLUSION

13.7% (10/73) of patients referred for transverse myelitis were found to have idiopathic relapsing TM. Azathioprine appears to be an effective treatment for the suppression of relapses in idiopathic relapsing TM.

## REFERENCES

- <sup>1</sup>Transverse Myelitis Consortium group. Proposed diagnostic criteria and nosology of acute transverse myelitis. *Neurology* 2002;59:499–505
- <sup>2</sup>Chan, KH, Tsang, KL, Fong GCY, et al. Idiopathic inflammatory demyelinating disorders after acute transverse myelitis. *Eur J Neurol* 2006, 13: 862–868.
- <sup>3</sup>de Seze, J, Lanctin, C, Lebrun, C, et al. Idiopathic acute transverse myelitis: Application of the recent diagnostic criteria. *Neurology* 2005;65:1950–1953.

	M/F	Age of onset	Pre-Tx ARR	Treatment (drug)	Post-Tx ARR
Patient 1	M	35	1	None	N/A
Patient 2	F	73	2.67	AZA then CYC (due to ↑ LFTs)	0
Patient 3	F	60	0.6	AZA	0
Patient 4	M	40	0.67	AZA then MMF (due to ↑ LFTs)	0
Patient 5	F	33	4	AZA	0
Patient 6	M	41	1.5	AZA	0.5
Patient 7	F	46	2.12	AZA	0.7 (1 off meds)
Patient 8	F	53	1	AZA then MMF due to lack of effect	1
Patient 9	F	30	0.22	AZA	0
Patient 10	F	40	7	CYC then AZA due to lack of effect	2 on CYC, 0 on AZA