

Venlafaxine induced PLMD in a young patient

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Introduction

Evidence suggests that certain antidepressants especially the SSRI group are associated with an increase of periodic leg movements (PLM) that may disturb sleep^(1,2). This evidence has however been restricted to retrospective and cross-sectional studies with small sample sizes. Frequent electroencephalographic arousals or awakenings associated with periodic leg movements (PLM) might be responsible in part for the complaints of sleep disturbances made by patients treated with antidepressants⁽³⁾.

Background

We report a case of a 33 year old student nurse who was referred to our sleep clinic with excessive daytime sleepiness, lack of energy and snoring. His ESS was 14. He was on Venlafaxine 75 mg BD for depression. He was initially on shift work which was curtailed in view of his excessive sleepiness. There was a family history of sleep paralysis in his dad. He was a life-long non-smoker and consumed alcohol and coffee in moderation. His blood tests were normal. He underwent a sleep study which did not show any sleep disordered breathing but showed a PLM index of 31. A trial of dopamine agonist (Ropinerole) was undertaken.

There was a complete lack of response to ropinerole and he was trialed on clonazepam. In view of a family history of sleep paralysis and personal history of momentary loss of tone, a full overnight PSG including MSLT was arranged. This showed a PLM index of 120/hour (Fig. 1) with associated arousals and sleep fragmentation.

This shows the high arousal index associated with the high PLM index

Fig. 1

University Hospital
Sleep Laboratory

RESPIRATORY & AROUSAL SUMMARY

Respiratory Disturbance Index (total sleep time)

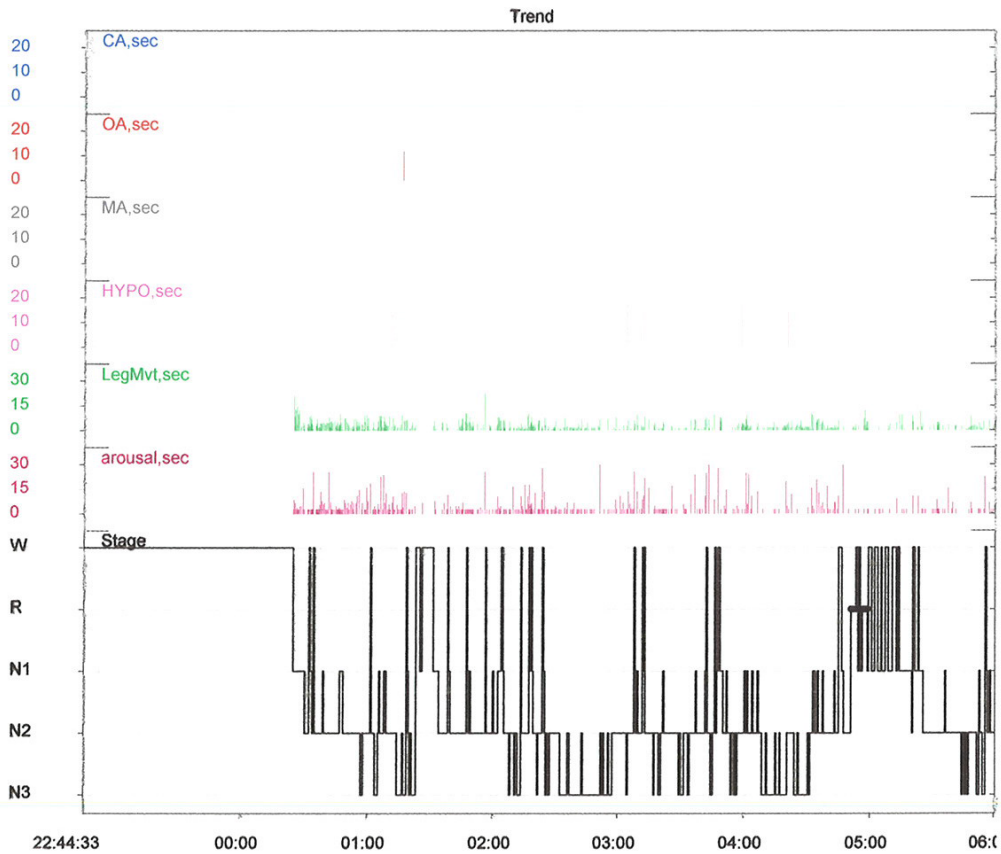
	REM #/h (REM)	NREM #/h(NREM)	TST #/h (sleep)
RDI	0.0	1.4	1.4

Respiratory Events Summary (total sleep time)

	OA	CA	MA	Sum Ap	HYP	Events
Number	1	0	0	1	6	7
Index [#/h TST]	0.2	0.0	0.0	0.2	1.2	1.4

Body Position Distribution

Position	Duration (min)	Sleep (%)	CA (#)	OA (#)	MA (#)	HYP (#)	Index (#/h)	Desat (#)
Left	64.1	90.5	0	0	0	0	0.0	0
Prone	17.4	63.2	0	0	0	0	0.0	0
Supine	107.9	92.9	0	1	0	4	3.0	9
Right	146.1	93.0	0	0	0	2	0.9	3

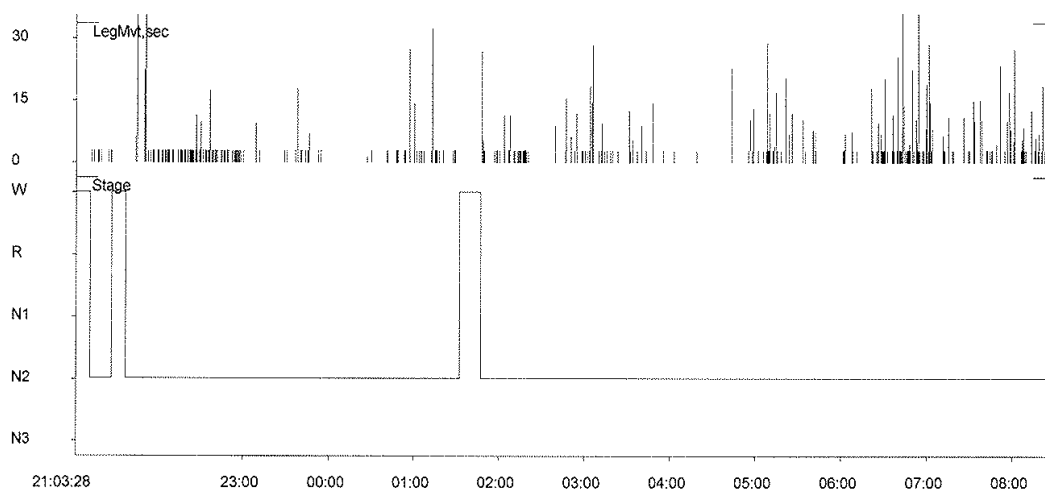


There was no significant sleep disordered breathing and RDI was 1.4.

A diagnosis of venlafaxine induced periodic induced PLMD was made. The patient was advised to contact his psychiatrist to be commenced on an alternative anti-depressant. His venlafaxine was eventually changed to Sertraline.

The patient made a significant improvement in terms of improved sleep quality and better energy levels during the day. He also had a Limited Sleep Study following this which confirmed that the PLMI had decreased to 20/hour. (Fig 2).

Fig 2



	Count	Index (#/h)
Leg movements	335	30.8
Leg movements meeting PLM criteria	222	20.4
Leg movements NOT meeting PLM criteria	113	10.4
Leg movements with arousal meeting PLM criteria		
Leg movements without arousal meeting PLM criteria	222	20.4
Leg movements with respiratory events with arousal	0	0.0
Leg movements with respiratory events without arousal	2	0.2
Leg movements with arousal (without respiratory event)	0	0.0
Leg mvts without arousal and without respiratory event	333	30.6

Conclusion

It is important to consider antidepressant use as a cause of PLMD leading to sleepiness. Depression and antidepressant use are too often considered to be cause of excessive fatigability and tiredness and it is important to do a sleep study to exclude this possibility of PLMD in these patients. GPs and psychiatrists need to be more aware of this possibility. A prospective study to ascertain what is the true incidence of PLMD the time frame of onset and course of illness would be useful.

References

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- (3) Yang, Changkook, White, David P., Winkelmann, John W Antidepressants and Periodic Leg Movements of Sleep. *Biological Psychiatry*, Sep 2005, vol. 58, no. 6, p. 510-514, 0006-3223 (Sep 2005)