



# Sympathetic Skin Response in Restless Legs Syndrome



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## INTRODUCTION

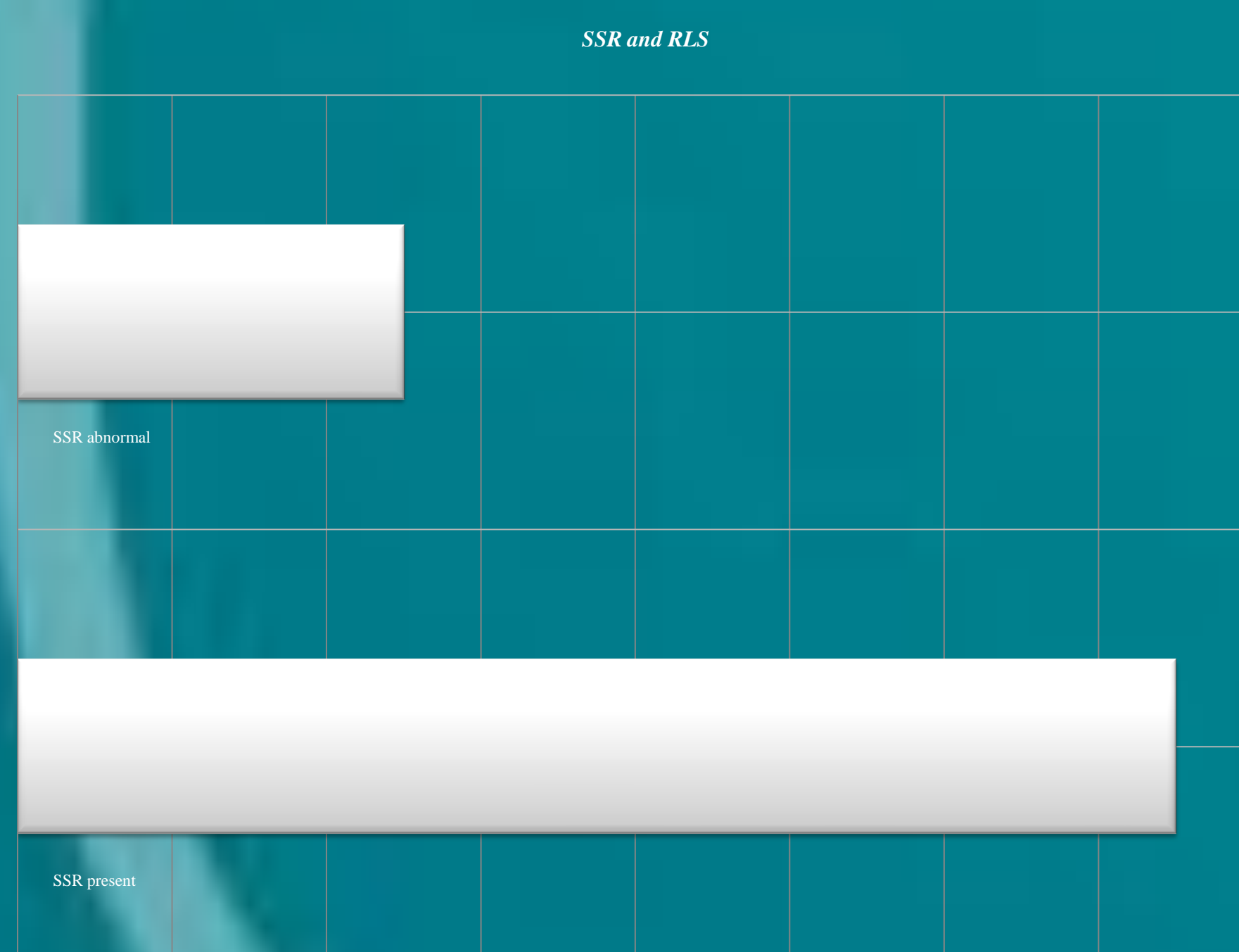
The sympathetic skin response (SSR) is a slow wave resulting from activation of the sudomotor sympathetic efferent fibers. SSR is well correlated with other autonomic function tests and its abnormality is documented in a variety of neurologic disorders such as diabetic neuropathy, cerebrovascular disease, Parkinson's disease, Multiple Sclerosis that are frequently associated with Restless Legs Syndrome (RLS). The evaluation of the sympathetic nervous system condition could be helpful to improve the understanding of physiopathology and diagnoses of RLS.

## METHODS

Twelve patients meeting the four diagnostic criteria of the International Classification of Sleep Disorders, 2005, for RLS were examined. Each subject completed the Sleep Quality Index (PSQI) and the Epworth Sleepiness Scale (ESS). All subjects signed an informed consent and the study was approved by Ethics Committee. Records were obtained with surface electrodes on foot after an electrical stimulation at Posterior Tibial nerve. We also obtained a correlation of the abnormal SSR with others neurophysiologic abnormal findings.

## RESULTS

The relationships between SSR abnormalities and RLS were analyzed. SSR was present in 9 patients (75%) and it was abnormal in 3 patients (25%), including abnormal foot latency with normal hand latency in 1 (33%), and no response in 2 (66%). We found no significant changes in SSR that could be associated with RLS.



## CONCLUSION

SSR is a simple and effective means of assessing the function of Autonomic nervous system. Abnormalities in SSR are associates with cardiovascular diseases. Although, RLS has higher risk of cardiovascular diseases, there is no correlation of RLS and impairment of the sympathetic nervous system.

### DISCLOSURE STATEMENT

This was not an industry supported study