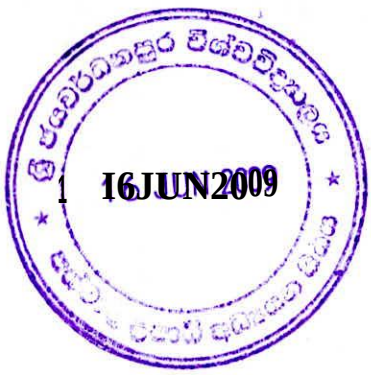
DOI: 10.31357/fmesphd.2009.00137

Menopausal symptoms, quality of life, postural balance and cognitive functions in a community based population of Sri Lankan women

by
Himansu Waidyasekera



Ph.D

2009

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Thesis submitted to the University of Sri Jayewardenepura for the award of the degree of Doctor of Philosophy in Physiology on 27th February, 2009

The work described in this thesis was carried out by me under the supervision of Prof. Kumudu Wijewardene of the University of Sri Jayewardenepura, Sri Lanka, Prof. Tord Naessen and Prof. Gunilla Lindmark of the University of Uppsala, Sweden and a report on this has not been submitted in whole or in part to any university or any other instituition for another degree / diploma.

---------- Date 26/02/2009

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ACKNOWLEDGEMENTS

I would like to express my sincere gratitude to all those who contributed to this thesis. I particularly wish to express my thanks to:

Prof. Kumudu Wijewardene, my supervisor for her invaluable guidance and patience in helping me to complete the thesis. I am deeply appreciative of all the support she has given me on this project.

Prof. Tord Naessen, my supervisor for sharing his knowledge of research on the menopause and giving invaluable advice and ideas regarding my research project.

Prof. Gunilla Lindmark, my supervisor for her invaluable advice and guidance.

I deeply appreciate the guidance and support given by my supervisors and would like to express my deep gratitude to them.

I am also deeply grateful to Prof. Karin Edebol Eeg-Olofsson for providing advice on the assessment of auditory evoked potentials in my study and the opportunity to learn about this at the Neurophysiology department of the University of Uppsala, Sweden.

I am deeply appreciative of the support given to me by the Head and staff of the Department of Physiology to carry out my research work.

I would like to express my deep gratitude and thanks to all the women who participated in this research study and to the public health midwives who assisted me in the field study.

I am deeply grateful to the SIDA / SAREC project of the University of Sri Jayewardenepura for providing funding for this research project.

Finally I would like to thank my family for their constant support and encouragement which helped me to complete my research project.

ABSTRACT

Menopausal symptoms, quality of life, postural balance and cognitive functions in a community based population of Sri Lankan women

Himansu Waidyasekera

In Sri Lanka there is less information available regarding the menopausal experience of women compared to that in the West. The present study was conducted to assess the prevalence of menopausal symptoms in a community based population of Sri Lankan women and the relationship between these symptoms and their quality of life. In addition the relationship of menopausal status to changes in postural balance, cognitive function and auditory brainstem responses (ABR) was assessed in a subsample of the selected study population. The relationship between changes in these functions and serum estradiol level was assessed in the postmenopausal women included in the subsample.

The study was of cross sectional design and was conducted on 683 women in the age group of 45 – 60 years living in the Kesbewa Divisional Secretariat (D.S) area in Colombo, Sri Lanka. A cluster sampling method was used for recruitment of the sample. A background questionnaire was used to assess demographic and socio-economic information and menstrual and reproductive history. The Menopause Rating Scale (MRS) was used to assess menopausal symptoms and the Short Form 36 health survey (SF-36) to assess the health related quality of life. All 3 questionnaires were administered through a structured interview to all selected women in the main study. The subsample consisting of 40 premenopausal and 67 postmenopausal women were selected from women recruited for the main study. The following tests were assessed in both the premenopausal

and postmenopausal women included in the subsample: postural balance using functional balance tests; reaction time using the CALCAP reaction time software, general cognitive functions using the Mini Mental State examination test (MMSE), verbal memory cognitive function using the Rey Auditory Verbal learning test (RAVLT) and the auditory brainstem responses (ABR). Serum estradiol levels were assessed in the postmenopausal women included in the subsample.

59.3% of the women in the study were postmenopausal. Over 91% of all women complained of one or more menopausal symptoms. The most prevalent menopausal symptoms were joint and muscular discomfort (74.7%), physical and mental exhaustion (53.9%) and hot flushes (39.1%). Women with menopausal symptoms had significantly lower ($p<0.05$) quality of life scores in most of the SF-36 domains when compared to women without symptoms. In the subsample postmenopausal women showed a significant ($p<0.05$) reduction in postural balance and longer ABR wave latencies compared to the premenopausal women. Higher serum estradiol levels in the postmenopausal women was significantly ($p<0.05$) associated with better performance in the reaction time and verbal memory cognitive function test.

In conclusion women of 45-60 years had a high prevalence of somatic type menopausal symptoms and the presence of these symptoms had a significant ($p<0.05$) association with a decrease in their health related quality of life. Postmenopausal status was associated with impairment in postural balance and delayed neural transmission in the auditory brainstem pathways. The study findings suggest that low serum estradiol levels in postmenopausal women may have a role in impairment of postural balance and cognitive functions.