# A Neuro-Vasculo-Endocrine Approach to Menopause

Menopause is a universal phenomenon for all women, however, the experience is highly individualized, and varies from person to person.[1] Different women encounter symptoms during menopause, and have to tackle differing complications and comorbid conditions.[2] Various models have been proposed to explain these person-specific aspects of menopause. The biopsychosocial model of health is relevant to menopause, as it underscores the psychological and social determinants of menopausal health.[3] Ethnocentric differences have also been documented, reminding us that menopause is perceived in differing ways by various cultures.[4] The biomedical pathogenesis of hot flushes has been explained based on prostaglandin release and sensitivity, and menopause has been linked to metabolic syndrome. Such research helps understand the symptomatology and presentations of menopause.[5,6]

There still remain many unanswered questions, however. Although menopause is viewed as an opportunity to enhance health, we are unable to explain etiopathophysiologic concepts to our patients in simple words. The hypothesis proposed by Uohashi *et al*., which states that variations in estrogen levels alter the resonant frequency of the vascular bed, is a welcome addition to our thought process.[7] The authors present an interesting way of approaching the inter-individual, and intra-individual variations in menopause symptomatology, and of addressing symptoms of concern.

The variability of symptoms has parallels with Indian experience menopausal medicine. In Punjabi, for example, some women may complain of cold sweats (thandi tareli), and others describe heat (garmi) and/or sweating (paseena).[4] Such variation may be due to differing blood flow patterns. An analogy can also be drawn with atherosclerotic cardiovascular disease. While some persons develop coronary artery disease, others fall prey to cerebrovascular or peripheral arterial disease. Yet others have polyvascular involvement. Can similar hypotheses be generated to explain these situations?[8]

Uohashi *et al*.[7] address the autonomic nervous system in their theory, and rightfully so. Autonomic dysfunction and menopausal symptoms have considerable overlap and may exacerbate each other If this is true, then autonomic nerve health can be used as a therapeutic, modality to alleviate menopausal distress. Mind-body medicine represents a promising way of managing such symptoms.[9] Perhaps yoga, mindful meditation, and other relaxation techniques can be studied, along with the research topics proposed by Uohashi *et al*., to manage menopause better.

Menopause is primarily an endocrine phenomenon, but its impact is far-reaching. As mid-life health specialists, we must approach our patients in a holistic manner, offering comprehensive health.[10] This can be ensured if we acknowledge and appreciate the multidimensional causes, clinical features, comorbidities, and concerns of menopausal symptoms.

Uohashi *et al*. remind us to view menopause not just as an endocrine system, but as a neuro-vasculo-hormonal condition. With this integrated approach, we should be able to develop, and offer, better means of management to women living with menopause.

*Sanjay Kalra*

Department of Endocrinology, Bharti Hospital, Karnal, Haryana, India

***Address for correspondence:*** Dr. Sanjay Kalra, Department of Endocrinology, Bharti Hospital, Kunjpura Road, Karnal - 132 001, Haryana, India.
E-mail: brideknl@gmail.com

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