Sudomotor

Sudomotor (from Latin sudor, 'sweat' and motor) describes anything that stimulates the sweat glands.

Sudomotor innervation is the cholinergic innervation of the sympathetic nervous system prominent in sweat glands which causes perspiration to occur via activation of muscarinic acetylcholine receptors.

Release of acetylcholine and nitric oxide induced vasodilation occur. Increased blood flow causes more sweat and also allows heat loss via skin.

Emotional centres in brain have some control over these fibres, head, face, upper chest are involved in blushing.

Sudomotor abnormalities

Autonomic dysfunctions including sudomotor abnormalities commonly occur in early Parkinson's disease (PD), but little is known about potential sudomotor abnormalities in idiopathic Rapid eye movement sleep behavior disorder (iRBD) , a strong prodromal marker of PD.

The aim of a study of Al-Qassabi from the Department of Neurology and Neurosurgery, McGill University, Montreal, QC, Canada. Sultan Qaboos University, Muscat, Oman. Hôpital du Sacré-Cæur de Montreal, Department of Neurobiology, Division of Clinical Geriatrics, Care Sciences and Society (NVS), Karolinska Institutet, Stockholm, Sweden was to assess sudomotor dysfunction by galvanic skin response using SudoScan, as well as other autonomic markers in 49 iRBD, 40 PD (21 with RBD, 19 without), 20 atypical parkinsonisms, and 41 age-matched controls. All subjects underwent SudoScan of their hands and feet, a 30-second electrocardiogram with assessment of beat-to-beat variability, assessment of orthostatic blood pressure changes and autonomic symptom questionnaires. The galvanic skin response in the hands of PD patients with RBD was significantly smaller than controls (hand mean difference = -7.877, 95% CI (-13.283, -2.470), p-value = 0.004) and PD patients without RBD (hand mean difference = -9.578, 95% CI (-17.215, -1.941), p-value = 0.014). iRBD and atypical parkinsonism did not have different SudoScan profiles than controls. Galvanic skin responses, as measured by SudoScan did not demonstrate significant sudomotor dysfunction in iRBD, but decreases were seen in the PD subtype associated with RBD [1].

1)
Al-Qassabi A, Pelletier A, Fereshtehnejad SM, Postuma RB. Autonomic Sweat Responses in REM Sleep Behavior Disorder and Parkinsonism. J Parkinsons Dis. 2018 Jul 16. doi: 10.3233/JPD-181357. [Epub ahead of print] PubMed PMID: 30040743.