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Gait changes and risk of falls in the elderly in Ibadan, Nigeria

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Background and Significance: Falls are deleterious to the overall wellbeing of older adults, as it is associated with high mortality morbidity, institutionalization and death. This often results from complex interaction of physiological, biochemical and environmental changes that occur with ageing. Foot and ankle motion are important during normal locomotion and they serve to attenuate force of gravity, stabilizes motion and forward propulsion during walking. Thus changes within the foot and ankle will impair balance and stability during walking with increase propensity to fall. Elderly people have increase propensity to fall and approximately 15% of people aged 65 years and above are likely to fall two or more times in a year. Studies have shown that aging affects foot and ankle kinematics resulting in decreased stride length, cadence and variation in walking velocity. These changes lead to abnormal gait, which is associated with high risk of fall. Gait is a complex motor phenomenon derived from coordination of central nervous

system (brain and spinal cord), peripheral nervous system and muscle strength and it has been documented as an independent and predictive marker for fall thus making it a key component of fall prevention intervention, Therefore a comprehensive understanding of the biomechanics of age related changes of gait will help to identify early risk of falls and thus prevent it. Till date no study had investigated the complex interaction between kinematic changes and biochemical influence on falls in the elderly in sub Saharan Africa. Thus we are currently investigating the gaits dynamics in the elderly using a multi-segment foot pressure model and to identify oxidative stress and inflammatory marker associated with falls. We hypothesized that marked derangement in the foot kinematics increases the risk of fall in the elderly

Aim: To determine age related gait changes and risk of falls in the geriatric population in Nigeria.

Biography

Temitope Farombi has graduated from University of Ibadan. She has been trained in internal medicine at the University College Hospital (UCH) and Neurology at UCH Ibadan Nigeria. She obtained masters degree in Clinical Neuroscience at King's College London. Presently she is a Consultant Neurologist at the Chief Tony Anenih Geriatric center University college hospital, the first geriatric center in West Africa sub-region. She is practicing specializes in the critical care neurology of the elderly, movement disorders, Dementia and headaches. She has been a visiting scholar of the Northwestern University Chicago, USA and has published many articles in scientific journals.

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