CU4.

FOREARM SKIN TEMPERATURE CHANGES DURING AND AFTER A SHORT PERIOD OF ARTERIAL OCCLUSION: A POTENTIAL TOOL TO ASSESS VESSEL DISEASE

K.S.J.CHAMINDA, K.S. ARIYADASA, P.CHANDRASEKARA, D.M.S.B. DISSANAYAKE, D.G.C.K.HEMANTHA, W.N.M.K.PERERA, A.A.A.S.W. RATNASURIYA AND C.D.A. GOONASEKERA*

*Department of Physiology, *Department of Anaesthesiology, Faculty of Medicine, University of Peradeniya, Sri Lanka*

Skin temperature change is an important consequence of reactive hyperaemia that follows a short period of arterial occlusion. In this study we have assessed this phenomenon comprehensively and its reproducibility in healthy subjects. In addition, the deviations of the pattern of temperature change among patients with peripheral vascular diseases were also evaluated.

A group of volunteer healthy young adults (male:female 18:14, age range 20 - 25 years) was studied. The skin temperature of their hypothenar eminence was continuously measured after a 3-minute period of total arterial occlusion. The test was repeated a day later under same environmental conditions to assess reproducibility. Skin temperature change following reactive hyperaemia of three patients with peripheral vascular disease was also studied.

The results show a specific pattern of temperature change in the healthy population. Soon after the release of arterial occlusion we observed a rapid and reproducible increase in skin temperature at the hypothenar eminence. This rise in temperature was followed by a gradual fall towards the basal temperature. The temperature changes among the three patients were clearly abnormal.

Reactive hyperaemia after a standard period of arterial occlusion produces a reproducible pattern of temperature change in the hypothenar eminence in normal subjects. This pattern is abnormal in subjects with vessel diseases and suggests that this technique may be a valuable tool for assessing vascular reactivity