Dehydration exacerbates cerebral microvascular responses to hyperthermia

Heatstroke is a major health problem in Arabian Gulf region, especially during the annual Pilgrimage to Mekkah. Collaborating closely with the Microcirculation group of the UAE University in Al Ain initially, and later with the Heat Injury Group at King Faisal Specialist Hospital and Research Center, this work is concerned with experimental procedure involving the in vivo animal model. Spraque-Dawley rats and C57 BL/6 mice, for induced thrombosis of cerebral microcirculation, utilizing hyperthermia, photochemical means, and dehydration to test susceptibility to thrombosis in cerebral microvasculature. Dehydration enhances platelet aggregation in pial arterioles which may lead to stroke. The histological and ultrastructural examination of the cerebral vessels, capillaries and surrounding milieu of dehydrated animals may reveal the cellular basis for this phenomenon. Possible means to alleviate or even reverse the effects of hyperthermia, photochemical and dehydration effects are also explored. This work has already led to several publications.

Currently, advancing the above work is taking place at the University of Sharjah Research Institute and several publications on the subject are expected to add more knowledge to the current literature.

Biography

Homsi completed his MD at the University of Damascus School of Medicine, did his postdoctoral studies at the University of Illinois School of Medicine in the US; then became American Board of Pathology Diplomat and Fellow of the College of American Pathologists in 1990. Currently, he is the Chairman of Neurosciences Unit, College of Medicine, University of Sharjah, and Senior Consultant Pathologist at the University Hospital Sharjah, UAE. He has presented more than 90 conference papers, published five books and book chapters, and more than 40 papers in reputed journals.

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