

INTRODUCTION

Recently, important strides have been made in clinical neurology and clinical neurosurgery, culminating in improved patient care. The last ten years have witnessed a new sophistication in neuro-radiology, and the clear development of neuro-ophthalmology as a subspecialty. The addition of the operating microscope to neurosurgery has improved the quality of the operation which we can provide for our patients. A renewed interest in and study of cerebral vascular disease has aided our understanding of the pathophysiology of this disorder. Of the various clinical neuroscience frontiers that have been forged, an improved understanding of the pathophysiology of brain injury is one of major significance. Much has been learned, both in laboratory and in clinical investigation, concerning the brain's response to insults such as anoxia-ischemia, elevated intracranial pressure, trauma, and neoplasm. Alterations in cerebral blood flow and intracranial pressure in these conditions have been studied, and more recently studies of the brain's metabolic response to insults have been conducted. The clinical goal of improving our treatment of the insulted brain is becoming more of a reality.

It is to these areas that the speakers at the 27th Stoneburner Lecture Series addressed themselves. The Stoneburner Lecturer was Dr. Thomas W. Langfitt, Charles H. Frazier Professor and

Chairman of the Division of Neurosurgery at the University of Pennsylvania. Leading us are Dr. Langfitt's pioneering efforts and continuing studies investigating the brain's pathophysiological response to injury. His first lecture, "The Interrelationship of Intracranial Pressure, Cerebral Blood Flow, and Brain Metabolism in Experimental Brain Injury," summarized much of his own work and provided a basic introduction to the program. His second lecture, "Clinical Advances in the Management of Patients with Severe Head Injury," demonstrated how an improved understanding of the brain's response to an insult can improve patient care.

The first part of the program emphasized cerebral vascular disease, and is presented in this issue. The second part of the program related primarily to the clinical care of patients with mechanical brain injury, brain tumors, and seizures, and will be presented in the following issue of the *MCV Quarterly*.

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