

Supplemental Abstracts — Addendum to the Programme of the XI Canadian Congress of Neurological Sciences

ICP, Aneurysms and Subarachnoid Hemorrhage.

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The measurement of intracranial pressure is established as an important adjunct in the management of patients with altered intracranial dynamics resulting from space occupying mass lesions, hydrocephalus, and brain swelling. This report relates experiences obtained in the measurement of ICP in patients with intracranial aneurysms and subarachnoid hemorrhage.

In these patients ICP is a particularly important parameter since blood flow is frequently decreased to marginal levels by vasospasm and small changes in intracranial and perfusion pressure become of critical importance.

In this series of patients, ICP was valuable in the diagnosis and treatment of brain swelling, acute intracerebral and subdural hematomas, and communicating hydrocephalus. It was also helpful in preventing abrupt rises in ICP during anaesthetic induction. The ICP measurements provided an objective basis for the use of hypertonic agents, CSF drainage, and hyperventilation, and in avoiding the fulminant brain swelling which may occur when autoregulation is impaired and the systematic arterial pressure is raised to improve cerebral perfusion compromised by vasospasm.

Visual Evoked Potentials in Leber's Hereditary Optic Neuropathy

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Pattern-reversal visual evoked potentials (VEPs) were measured serially in two brothers with Leber's hereditary optic neuropathy during the active phase of the disease. Asymptomatic members of their immediate family were also examined. In the affected individuals, VEP latency and configuration were normal prior to the onset of visual symptoms. The earliest abnormalities consisted of either (a) prolongation of VEP latency, or (b) unusual VEP morphology characterized by a double positive peak. As visual acuity declined progressively over a period of months, there was a parallel progressive prolongation of VEP latency accompanied by less consistent diminution of VEP amplitude. In two eyes, VEP ultimately could no longer be measured. VEP latency was normal in most of the asymptomatic family members, including the maternal presumptive carrier. These findings suggest that VEP measurements do not distinguish the presymptomatic or carrier states, but do permit quantitative assessment of the activity and progression of the disease.