Neurosurgical forum


RESPONSE: As Dr. Wise has pointed out, the metabolic response to head injury differs from the response to systemic injury and to cranial surgery. The increase in caloric consumption and nitrogen excretion resulting from elective cranial and noncranial surgery is mild. In systemic trauma the intensity of these indices of catabolism increases as the severity of injury increases, with major burns and sepsis producing the most extreme response. Kinney and Long, et al., have found that nitrogen excretion increases in parallel with caloric consumption, with a catabolic peak occurring about 10 days after injury and a predictable anabolic phase following several weeks after injury.

Our present data indicate that in head injury the catabolic phase is long-lasting and has its onset immediately after injury rather than a week later. A close relationship between nitrogen excretion and caloric consumption has not been found in nonparalyzed patients, and in barbiturate coma there is a marked increase in nitrogen loss with a decrease in caloric consumption. Therefore, I would agree with Dr. Wise’s statement that decreased spontaneous movement is likely to be a major factor in the nitrogen wasting that has been found. The question of steroid effect is being examined. The most curious aspect of this phenomenon is the basic question of whether in some way the damaged brain benefits from the increased catabolism of protein and increased systemic oxygen delivery and oxygen consumption resulting from isolated head injury. An alternative explanation is that this is a maladaptive response resulting from injury to areas of the brain that in other circumstances would mediate a similar neurohumoral response to a systemic insult, such as a burn.

GUY L. CLIFTON, M.D.
Houston, Texas

References

Parkinsonism due to Subdural Hematoma

To THE EDITOR: With regard to the report by Sandyk and Kahn (Sandyk R, Kahn I: Parkinsonism due to subdural hematoma. Case report. J Neurosurg 58:298–299, February, 1983), I have had a similar case, which was reported in 1963. The lesion was detected by pneumoencephalography performed during a stereotaxic procedure and was verified by subsequent angiography.

EBRAHIM SAMIY, M.D.
Teheran, Iran

Reference

Adequacy of Intravenous Digital Subtraction Angiography: Erratum

To THE EDITOR: In reviewing my reply to the Letter to the Editor by Diaz and Ausman (Diaz FG, Ausman JI: Adequacy of intravenous digital subtraction angiography. J Neurosurg 60:1331, June, 1984, Letter: Little JR, Response), I noted that there is a portion of a sentence missing at the beginning of the last paragraph. This phrase must have accidentally been deleted at the time of printing. Unfortunately, its omission substantially changed the overall meaning of the letter. The sentence in its entirety should read: “It must be realized that there are limitations with IV DSA in that 15% of the studies do not adequately visualize the extracranial carotid arteries and 60% do not adequately visualize the major intracranial arteries.”

JOHN R. LITTLE, M.D.
Cleveland, Ohio

BCNU Treatment of Astrocytomas: Erratum

To THE EDITOR: In our recent article (Layton PB, Greenberg HS, Stetson PL, et al: BCNU solubility and toxicity in the treatment of malignant astrocytomas. J Neurosurg 60:1134–1137, June, 1984), an error appears in the text on page 1135, in the fourth paragraph. The next to last sentence should correctly read, “Once dissolved, each vial of BCNU was transferred by needle . . .”

PATRICIA B. LAYTON, R.N., M.N.
Ann Arbor, Michigan

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