Fatal Coma and Superimposed Acute Renal Failure in a Diabetic Peritoneal Dialysis Patient following Myelography

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ritories between the anterior and middle cerebral arteries, consistent with ischemic damage of toxic origin or secondary to systemic hypotension (fig. 1).

The temporal relationship between the iohexol injection and the onset of symptoms and the absence of major metabolic or struc-

Dear Sir,

Myelography is associated with a low incidence of serious neurologic complications which include neuropsychiatric abnormalities, seizures, encephalopathy and focal, neurologic deficits [1-6]. Symptoms peak a few hours after the procedure and are usually transient, although they may be irreversible [3-4]. No fatalities have been recorded. We report the case of a diabetic CAPD patient who developed irreversible coma and died after iohexol myelography.

A 60-year-old diabetic CAPD female patient with progressive paraparesis underwent cervical myelography with 10 ml of iohexol, which revealed spinal cord compression. She received dexamethasone before and for 48 h after the procedure. Sixteen hours after myelography, she complained of dizziness and nausea. The level of consciousness decreased and coma was present 50 h later. Neurological examination showed no other new findings. Simultaneously, the 500 ml/day residual diuresis disappeared and serum urea raised from 29.9 at admission to 60.3 mmol/l (175-355 mg/dl). There were no major abnormalities in serum sodium, potassium, glucose, osmolality or calcium. Computerized tomography of the brain showed subcortical atrophy. An electroencephalogram showed signs of moderate, diffuse brain damage. The cerebrospinal fluid was normal. The patient died 27 days later without improving consciousness. Autopsy revealed multiple symmetric ischemic encephalic lesions in watershed ter-

Fig. 1. Left occipital lobe. Left, panoramic view of the corticosub-cortical ischemic lesion, surrounding a sulcus. HE. $\times 40$. Right, detailed view of the edge of the ischemic lesion, showing congestive blood vessels and numerous histiocytes. There is edema and reactive gliosis in the preserved parenchyma. $\times 70$.

tural brain abnormalities are consistent with iohexol-induced encephalopathy [5]. The fatal outcome may have been related to the coexistence of several risk factors for radio-contrast neurotoxicity. Cervical myelography, a seizure history, older age, female sex, dehydration and diabetes predispose to con-

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trast-induced encephalopathy [1, 6]. Renal failure had not been previously defined as an independent risk factor, although the adverse influence of dehydration is thought to be mediated by a decreased radiocontrast clearance and dialysis has been advocated as a useful therapeutic measure for the management of neurologic complications following parenteral radiocontrast [1]. We are not aware of any report of significant impairment in renal function after myelography, but the fall in urine output and increased uremia 24 h after the procedure suggest that contrast-mediated superimposed acute renal failure in a diabetic with minimal residual renal function [7] may have contributed to decreased radiocontrast clearance.

In summary, we report a fatal neurologic complication of iohexol myelography. Iohexol, a new, nonionic contrast medium has been associated with less neurotoxicity [8], but it can induce encephalopathy [5] and has not been tried extensively in high-risk populations. We suggest that the concomitant presence of diabetes and renal failure confers a high risk status for intrathecal radiocontrast neurological complications. In addition, the impact of further renal function impairment in patients already on dialysis should not be underestimated.

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Coma and Myelography in CAPD

Announcement

April 10-12, 1992 Chicago, Ill., USA

National Kidney Foundation Spring Clinical Meeting

The National Kidney Foundation (NKF) will present a comprehensive clinical meeting next spring entitled "Consultative Nephrology". It will offer nephrologist sessions on the prevention of acute and chronic renal failure. In addition, a state-of-the-art interactive computer workshop will address the care of elderly hypertensives and hypertension in Blacks, using case analyses. A

special “Meet the Experts” luncheon will highlight the 2nd day of the meeting. Other topics on the program include: adequacy of dialysis, erythro-poietin in chronic renal insufficiency, diabetes and renal disease, interstitial renal disease and AIDS nephropathy. There will also be a half-day satellite meeting on peritoneal dialysis. Commercial exhibits will be open to all registrants.

The Renal Physicians Association will sponsor a special symposium in conjunction with this NKF program, entitled “ESRD: Medical and Socioeconomic Factors that Affect Survival”.

All events will be held at the Downtown Marriott, 540 North Michigan Avenue, Chicago, IL 60611 (USA). For additional information, please write the National Kidney Foundation, 30 East 33rd Street, New York, N.Y. 10016 (USA) or phone that office at (800)622-9010.