Conservative versus Operative Management of Femoral Neck Fractures in Patients on Long-Term Dialysis

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Dear Sir,

Renal osteodystrophy has been shown to be progressive in end-stage renal failure, up to now. Consequently, patients who have been on dialysis for several years are prone to fractures. Bones exposed to constant or heavy stress, such as ribs, vertebrae and femoral necks, are frequent sites of fractures in dialysis patients [1–3]. The best way to manage femoral neck fractures in dialysis patients is not easy to predict. Although operative management seems to be superior to conservative management for femoral neck fractures of other osteopenic states [4], uremics with osteopenia are different. In such patients, major surgery carries increased morbidity and considerable mortality [5]; patients on dialysis for many years, who are especially prone to fractures, usually have serious cardiac and other diseases, and there is always the question whether operated bones with advanced osteodystrophy will ever heal. Two recent publications shed some light on the question of management of femoral hip fractures in dialysis patients. The first publication compared, in a retrospective analysis, operative and conservative management of femoral neck fractures in dialysis patients [6]. The patients reported were older men, with a mean age of 67 ± 9 (SD) years, were on dialysis for 9.2 ± 4.8 years, had severe osteodystrophy, and suffered from multiple co-morbid diseases, primarily cardiac. Mortality differed greatly between the operated patients, among whom 1 of 7 (14%) died, and those managed conservatively, all 4 of whom died from the consequences of the fracture (confusion, malnutrition, pneumonia, sepsis, withdrawal from dialysis because of absence of bone healing). No difference in frequency and severity of co-morbid conditions was found between the operated and nonoperated patients.

The operated patients who survived had prolonged hospitalizations (40 ± 24 days) and ambulated slowly, but the operated hips healed and stabilized in spite of the advanced osteopenia. Common problems encountered in the postoperative period included prolonged (lasting several days) confusional states related to the use of narcotics, severe hypoalbuminemia which developed rapidly (within 2 weeks) in all operated and nonoperated patients and required several months to reverse in the operated patients, and the development of decubitus ulcers of sacral areas and heels in several patients.

In the second publication [7], femoral neck fractures were managed operatively. The important finding of this publication is that specific treatment of the metabolic bone disease (for example

removal of aluminum by che-lation in cases of aluminum osteodystrophy) contributes to bone healing and accelerates ambulation, even in patients with advanced osteodystrophy. Thus, the published evidence strongly supports early operative intervention as the management of choice for femoral neck fractures of patients on dialysis, even in the presence of both advanced osteodystrophy and severe co-morbid conditions. Specific aggressive management of the metabolic bone disease present in an individual patient (hyperparathyroidism, aluminium osteodystrophy) should be undertaken at the same time. In the postoperative period, narcotics should be used cautiously, and every effort should be exerted to prevent malnutrition and decubitus ulcers.

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