Popliteal Cysts in Chronic Hemodialysis Patients

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Dear Sir,

The development of popliteal tumors has recently been reported as a possible manifestation of dialysis-related amyloidosis [1, 2]. This prompted us to carry out a clinical and radiological (ultrasonography and/or CT scan) screening in our hemodialysis patients who were on treatment for more than 60 months.

28 patients were eligible for the investigation; at the time of the study, they had been dialyzed for 127 ± 40 months and solely or mainly cuprophane membranes had been used in all.

11 popliteal masses (maximum diameters 9×5 cm) were detected in 6 (21.4%) of these patients.

Table 1 reports the characteristics of these patients; as shown, all suffered from some of the major features of dialysis-related amyloidosis. 10 of the 11 masses were filled with a fluid material, whereas the remaining one appeared dense and partly calcified. In the 3 patients who were investigated by CT scan, cysts could be demonstrated to communicate with the joint cavity (Baker's cysts) (fig. 1). In 1 of these 3 patients, immunocytochemical analysis

Fig. 1. CT scan view of popliteal cysts (patient 3). Both knees were affected and both cysts are demonstrated to communicate with the respective joint cavity.

demonstrated diffuse β_2 -microglobulin-amyloid deposition within the synovial wall of the surgically removed cyst. Interestingly, in this patient a β_2 -microglobulin-positive synovitis of the same knee had been demonstrated

Table 1. Clinical and radiological features of the patients

6	f	59	189	yes (bilateral)	no	yes (right shoulder)
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by arthroscopy some months before the popliteal mass developed; this could suggest that amyloid deposition was the initial event in the formation of the cyst.

Our findings confirm the high prevalence of popliteal tumors in chronic hemodialysis patients, probably secondary to amyloid deposition; conversely, the development of such tumors in these patients would include amyloidosis in the differential diagnosis.

Reese W, Hopkovitz A, Lifschitz MD: β_2 -Microglobulin and associated amyloidosis presenting as bilateral popliteal tumors. Am J Kidney Dis 1988;12:323–325.

References

1 Brancaccio D, Gallieni M, Padovese P, et al: Dialysis amyloidosis with massive popliteal deposition of β_2 -microglobulin amyloid. Lancet 1988;ii:802.