Non-Hodgkin’s Lymphoma Presenting as Acute Renal Failure: A New Case

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Non-Hodgkin’s lymphoma (NHL) presenting as acute renal failure due to lymphomatous infiltration of the kidneys is rare. We report a new case characterized by severe renal lesions of high-grade NHL at diagnosis and by end-stage renal failure despite a favourable effect of chemotherapy. A 60-year-old woman without previous medical history was admitted for anuria preceded for several days by dizziness, nausea and headache. Eight months earlier urea nitrogen was normal. On entry arterial blood pressure was 210/110 mm Hg, there was a body weight loss of 4 kg and a bilateral palpable mass in the lumbar region. Laboratory results were as follows: serum creatinine 619 µmol/l (7 mg/dl); urea nitrogen 16 mmol/l (45 mg/dl); sodium 140 mmol/l; potassium 5.6 mmol/l; calcium 2.45 mmol/l (9.8 mg/dl); phosphate 1.9 mmol/l (5.9 mg/dl); uric acid 470 µmol/l (7.9 mg/dl); bicarbonate concentration 22 mmol/l; normal urine sediment; proteinuria 1.4 g/l; normal aminotransferase, alkaline phosphatase, lactic dehydrogenase and γ-glutamyltransferase; red blood cells 3.58 × 10^9/ml (3,580,000/µl); leucocytes 4.4 × 10^9/l (4,400/µl); (neutrophils 79%, lymphocytes 19%, eosinophils 0%); platelets 300 × 10^9/l (300,000/µl); fibrinogen 0.3 g/dl (normal 0.2-0.45); C reactive protein 14.9 mg/l (normal < 10). Serology for cytomegalovirus, human immunodeficiency, Ep-stein-Barr, herpes simplex, and A, B, and C hepatitis virus were negative. Circulating autoantibodies were absent; complement, pro-tide electrophoresis, and angiotensin convertase were normal. Chest X-ray was normal. Abdominal echography showed enlarged kidneys with no evidence of a dilated excre-
tory system; renal angiography showed stretched disorganized distal arteries; abdominal computed tomography scan (CTS) confirmed enlarged kidneys with diffuse multiple enhanced contrast areas in the medulla without enlarged deep lymph nodes or splenomegaly. A percutaneous renal biopsy showed an extensive polymorphic cell infiltrate disrupting the architecture of the inter-stitium and moderate fibrosis. Standard immunofluorescence was negative. The patient was given oral quinolone and haemodialysis was begun. Two months later she presented a skin lesion on her back and superficial as well as retroperitoneal enlarged lymph nodes appeared. Both skin and lymph node biopsies, and a second, echo-guided, percutaneous renal biopsy showed a diffuse polymorphous centroblastic lymphoma [1] or high-grade NHL of the H subtype according to the Working Formulation [2], expressing B-lymphocyte antigens on immunopheno-typing. Serum lactic dehydrogenase increased to 1,290 IU/l (n < 500). Head and thorax CTS, colonoscopy, small bowel opacification and oesogastric fibroscopy were normal. A standard monthly chemotherapy regimen (CHOP) in conjunction with the administration of granulocyte colony-stimulating factor was started. After 6 sessions of treatment complete remission was achieved. No complication due to chemotherapy was observed. After 26 months of follow-up the patient remained free of disease. Lymphomatous infiltration of the kidneys is a rare presenting manifestation of NHL, especially when responsible for acute or rapidly progressive renal failure [3-5]. It was suspected in our case because of morphological data

but was diagnosed only on the second biopsy. Aggressive chemotherapy regimens with or without radiotherapy, preferably performed at full dose with haematopoietic grow factors, are regarded as the most effective treatment of NHL, even in the presence of renal extension [5-7], but relapse is frequent and long-term patient survival remains poor [8, 9]. In our observation, the patient was apparently free of the disease 26 months after the beginning of treatment but, in contrast with other reports in the literature [4-6], renal function did not improve, possibly as a consequence of the severe associated cell interstitial infiltrate. Considering these favourable initial results, we suggest the need for repeated and/or echo-guided renal biopsy in the presence of acute renal failure with enlarged kidneys, and the efficiency of high-dose chemotherapy in high-grade NHL complicated by renal failure.

References

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