Rapidly progressive renal failure as the onset of an IgA nephropathy in an elderly patient

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To the Editor,
IgA nephropathy is the most frequent primary glomerulopathy in the world. It is often presented as macroscopic haematuria (generally preceded by a respiratory infection in the upper airways, especially in children), and persistent microhaematuria with mild proteinuria. Nephrotic syndrome and acute renal failure are the least common manifestations. We describe the case of an elderly patient that was diagnosed with IgA nephropathy, as a result of rapidly progressive renal failure (RPRF).

The patient was a 78-year-old man with a history of prostate carcinoma, treated with brachytherapy and radiotherapy check-ups every 6 months; carpal tunnel syndrome; right hip operation; and no known drug allergies.

His doctor had referred him to the emergency department due to tiredness and pain in his lower limbs. The patient’s medical records indicated that he had suffered from nocturia on two occasions. The physical examination performed upon admission indicated that the patient’s general condition was fair. He was conscious and aware of his surroundings. He did not have jugular ingurgitation. Blood pressure was 135/85mm Hg, heart rate was 82 beats/min and SatO₂: 92%. The heart auscultation was rhythmic and pulmonary auscultation presented hypoventilation with isolated wheezing. The rest of the examination was normal.

The blood analysis (emergency department) was: creatinine: 2.9mg/dl (previous creatinine: 1.2mg/dl); potassium: 5.3mEq/l; haemoglobin: 11.5g/dl; haematocrit: 34.7%; remaining analyses, including venous gasometry and the coagulation test, were normal.

Systematic urine analysis showed: protein ++, blood ++. The sediment test showed haematuria, with isolated hyaline casts.

Chest X-ray and abdominal ultrasound did not show any pathological findings, the kidneys were of normal size, and the excretory tract was not dilated.

The subsequent blood analysis (common) showed: creatinine: 3.9mg/dl; urea: 181mg/dl; albumin: 2.7g/dl; total protein: 5g/dl; calcium: 6.9mg/dl; phosphorus: 8.1mg/dl; uric acid: 8.3mg/dl; sodium: 132mEq/l. 24-hour urine test found microalbuminuria, which was 620µg/min (normal range: 0-15µg/min). Other supplementary tests performed were normal (including viral serology, blood culture, tumour markers and thyroid hormones). The immunological test only showed a decrease in IgG of 574mg/dl (normal value: 751-1560) and an increase in C-reactive protein to 8.7mg/dl. No monoclonal peak was detected on the electropherogram.

The patient had been admitted to the internal medicine department, where progressive deterioration of the renal failure and oligoaunuria were confirmed. Renal replacement therapy with haemodialysis was started. Given the rapidly progressive acute renal failure, a kidney biopsy was performed, finding the following: 12 glomeruli per cross-section, none of which was sclerotic.

Zoledronic acid, but the latter is not recommended when creatinine levels are above 3mg/dl. Some studies recommend using ibandronate for patients with renal failure, as it is less nephrotoxic, and some authors have even used ibandronate for patients with myeloma and renal failure caused by hypercalcemia or nephrocalcinosis, recovering renal function and calcium levels. Haemodialysis must be started for oliguric renal failure cases. In our case, we started treatment with calcitonin and daily haemodialysis, but the patient’s condition progressed rapidly, with multiple organ failure and respiratory distress due to tumoural calcinosis. In conclusion, we must highlight the need to closely monitor calcium levels in patients with multiple myeloma and start therapeutic measures early. For cases of malignant myeloma and fast therapeutic calcium levels in patients with multiple myeloma, as it is less nephrotoxic, and some authors have even used ibandronate for patients with myeloma and renal failure caused by hypercalcemia or nephrocalcinosis, recovering renal function and calcium levels. Haemodialysis must be started for oliguric renal failure cases. In our case, we started treatment with calcitonin and daily haemodialysis, but the patient’s condition progressed rapidly, with multiple organ failure and respiratory distress due to tumoural calcinosis. In conclusion, we must highlight the need to closely monitor calcium levels in patients with multiple myeloma and start therapeutic measures early. For cases of malignant myeloma and renal failure caused by hypercalcemia or nephrocalcinosis, we recommend using ibandronate for patients with multiple myeloma receiving zoledronic acid vs ibandronate: A retrospective medical records review. J Can Res Ther 2010;6:31-5.

We observed an expansion of the mesangial matrix with cellular proliferation in all of the glomeruli examined. On occasions, they affected the whole glomerulus, with pseudo-lobe images of the vascular tuft. There were fibrinoid necrosis foci in three glomeruli. The immunofluorescence showed intense positivity for IgA and C3, being negative for IgG and IgM. All the alterations found pointed to mild acute tubular necrosis with mixed inflammatory infiltration. The final diagnosis was IgA nephropathy with diffuse proliferation and fibrinoid necrosis foci (Figures 1 and 2).

As well as the support therapy with furosemide, enalapril was administered at 40mg/day, irbesartan 150mg/day and doxazosin 8mg/day. The biopsy findings lead to administration of three pulses i.v. of 1g of 6-methylprednisolone followed by prednisone at a dose of 1mg/kg/day. Diuresis was recovered with these measures, and kidney function gradually improved without the need for dialysis (creatinine reduced from 5.4mg/dl to 2mg/dl upon hospital discharge). Table 1 shows the follow-up and progress following hospital discharge.

There are mild forms of IgA nephropathy that can go unnoticed. In fact, in some autopsy and biopsy studies conducted to assess renal grafts, IgA nephropathy can be found in around 1.5% of the normal population. We describe the case of an elderly patient, who had no previous nephrology problems, who was diagnosed with IgA nephropathy following a kidney biopsy to confirm the cause of RPRF.

IgA nephropathy may be underdiagnosed. Given our patient’s history of prostate carcinoma, this nephropathy could have gone unnoticed if it had not been for obvious manifestations of acute renal failure.

Although this nephropathy is the most frequent one, an optimum treatment has not been well-established. Based on a review of 20 years experience, a third of these patients can develop end-stage chronic kidney disease (ECKD). Two studies have recently been published which have shown the benefits of co-administering corticoids (short-term) and angiotensin-converting enzymes (ACE) to treat IgA nephropathy with moderated histological lesions, with proteinuria above 1g/day. Combined immunosuppressant therapy is indicated in patients with rapidly progressive active severe disease and with histological evidence of active severe inflammation (crescents). In our case, we treated a patient with a history of rapidly progressive prostate cancer, with diffuse proliferation and fibrinoid necrosis foci and with no chronicity data. We decided to treat the patient with i.v. pulsed steroids followed by oral steroids with ACE and angiotensin II receptor antagonists. The patient progressed satisfactorily.

In summary, we have reported one more IgA case in an elderly patient, which probably would have gone unnoticed if the aggressive clinical symptoms had not started.

Table 1. 12-month clinical follow-up following hospital discharge

<table>
<thead>
<tr>
<th>Time</th>
<th>10 days</th>
<th>2 months</th>
<th>3 months</th>
<th>6 months</th>
<th>1 year</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cr plasma (mg/dl)</td>
<td>2</td>
<td>1.6</td>
<td>1.7</td>
<td>1.5</td>
<td>1.4</td>
</tr>
<tr>
<td>P (O) (g/24 h)</td>
<td>5.7</td>
<td>1.67</td>
<td>0.71</td>
<td>(-)</td>
<td>(-)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Test</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Basic urine test</td>
<td>&gt;40RBC/HPF</td>
</tr>
<tr>
<td>Blood pressure (mmHg)</td>
<td>130/70</td>
</tr>
<tr>
<td>Enalapril</td>
<td>40 mg/day</td>
</tr>
<tr>
<td>Telmisartan</td>
<td>80 mg/day</td>
</tr>
<tr>
<td>Prednisona</td>
<td>80 mg/day</td>
</tr>
</tbody>
</table>

CR plasma: serum creatinine; P (O): proteinuria
To the Editor,

Haemophagocytic syndrome is a rare clinical condition characterised by a generalised, benign proliferation of histiocytes with significant haemophagocytic activity.\(^1\)\(^-\)\(^3\) The aetiology of these symptoms can be separated into two groups: primary or genetically determined, or secondary: virus, bacteria, fungus, parasites, neoplasia, collagen, immunodeficiency or drugs.\(^1\)\(^-\)\(^2\) Clinical symptoms include fever, hepatosplenomegaly, lymphadenomegaly, neurological symptoms, oedema and rashes.\(^1\)\(^-\)\(^2\)^\(^,\)\(^3\)\(^,\)\(^4\) The most important laboratory findings are: pancytopenia, hypertriglyceridaemia, hypofibrinogenaemia, hyponatraemia, hypoproteinaemia, increased levels of hepatic enzymes, increased amount of LDH and ferritin, pleocytosis in LCR and urine cultures; negative blood and urine tests; negative blood and urine cultures; negative cytomegalovirus (CMV) early-antigen associated with hemophagocytic syndrome. Blood tests showed: GOT/GPT: 135/156IU/l; LDH: 558IU/l; sodium: 130mEq/l; fibrinogen:133mg/dl; haemoglobin: 9.2 g/dl; and haematocrit: 26.8%; platelets: 48 000µl with normal leukocytes (normal formula: 5500µl), significant increase in triglycerides (738mg/dl), progressive deterioration of kidney function (creatinine around 4.5mg/dl). Normal haptoglobin, negative indirect Coombs test. Peripheral blood smear: few schistocytes with no reticulocytes. Bone marrow aspiration: compatible with haemophagocytic syndrome (Figure 1).