

*Case Report*

## Rapidly progressive interstitial renal fibrosis due to a chronic intake of a herb (*Aristolochia pistolochia*) infusion

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### Introduction

An outbreak of rapidly progressive renal failure was observed in Belgium in 1992–1993 and was related to a slimming regimen involving Chinese herbs [1]. Extensive interstitial fibrosis with atrophy and tubular loss was the major histological lesion [2]. *Aristolochia Fang-ji* has been suspected to be responsible for nephrotoxicity, which is attributed to aristolochic acid, an important constituent of *Aristolochia* spp. [3,4]. We report a patient presenting with end-stage renal failure due to chronic intake of an infusion made with a mixture of herbs containing *Aristolochia pistolochia*. Clinical and histological findings are identical to the Belgian cases.

### Case report

A 50-year-old man was referred for evaluation of progressive renal failure discovered during routine examination at another centre. Two years before admission serum creatinine was normal. Eight months before admission serum creatinine was 212 µmol/l. From that date his renal function continued to deteriorate until serum creatinine reached 698 µmol/l. At this time the patient was transferred to our hospital.

On admission the patient was asymptomatic. His previous clinical history was negative except for chronic intake—during 4 years—of a home-made mixture infusion. This infusion contained mint and another herb, identified as *Aristolochia pistolochia* (Trep Agrarian Training Centre, Lleida, Spain).

Clinical findings were unremarkable. Blood pressure was 150/85 mmHg. Serum urea and creatinine were

24.5 mmol/l and 795 µmol/l respectively. Urinary protein excretion was 0.3 g/24 h. Microscopic examination of the urine disclosed 3 red cells/h.p.f. Other laboratory data included: haematocrit 30%; calcium 1.9 mmol/l; phosphorus 2 mmol/l; intact PTH 250 ng/l (normal range: 10–60 ng/l). Antinuclear antibodies, antineutrophil cytoplasmic antibodies (ANCA) and serum cryoglobulins were negative. Serologies for hepatitis B and C were also negative.

Sonography showed the kidneys to be reduced in size (8.5 cms) with no signs of obstructive uropathy.

Renal biopsy was performed, showing on light-microscopy extensive, hypocellular interstitial sclerosis of the cortex with relative sparing of the glomeruli. Tubular atrophy was extensive, leading to the disappearance of atrophic tubular structures between glomeruli (Figure 1). Immunofluorescence staining disclosed no significant abnormalities. Only slight granular IgM and C3 deposits were present along segments of the capillary and tubular walls respectively. No sample for electron-microscopy was obtained. The patient began chronic haemodialysis, and is currently stable.

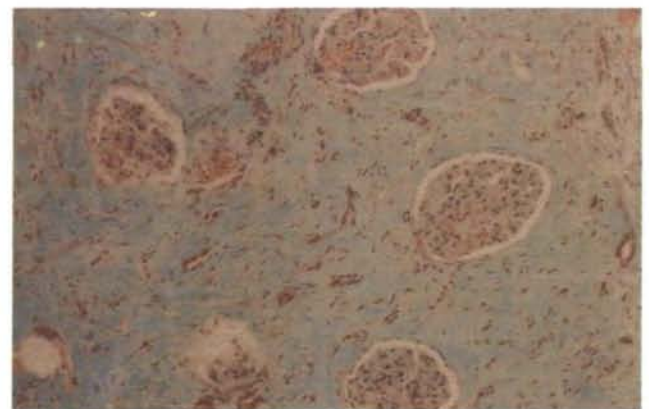


Fig. 1. Light-microscopy (Masson's trichrome stain, ×126). Superficial cortex with paucicellular massive interstitial fibrosis and loss of tubular structures with relative sparing of glomeruli.

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## Comment

Since the description of the Belgian cases of rapidly progressive interstitial renal fibrosis due to Chinese herbs, no more cases have been described in the literature. We now report the first case outside Belgium. In our case nephrotoxicity was also induced by a herb of the Aristolochiaceae family.

The patient lives in Catalonia (north-eastern Spain), area where he obtained the herb. *Aristolochia picta* is the most frequent species of the *Aristolochia* genus in Catalonia. This herb is traditionally used for 'jaundice' in farm animals [5]. However, our patient, without medical prescription, had been taking the *Aristolochia* infusion for several years because of non-specific right upper abdominal discomfort.

It is well known that *Aristolochia* spp is potentially nephrotoxic. Aristolochic acid might be the offending drug. The pathogenesis is not clear, but it seems that the primary lesion is a low-grade damage to tubular epithelial cells [6], leading to inflammation and scarring [2].

Two particularly relevant points are present in our case. First of all, the unusual method of intake as an infusion. In all previous cases reported the method of administration was complex formulation capsules containing several compounds. Secondly, as our case demonstrates, the so-called 'Chinese herbs'

like *Aristolochia* spp are European autochthonous herbs too.

In conclusion, in cases of interstitial nephritis of unknown origin nephrologists must investigate previous herbal treatments.

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