Dear Sir,

Acute renal failure may complicate urinary tract infection by means of urinary tract obstruction or extensive tissue destruction. Such conditions characteristically lead to a dramatic clinical course, especially in patients with a single functioning native or transplanted kidney [1]. We report an elderly patient who developed acute on chronic kidney failure as a result of an asymptomatic pyelonephritis caused by group B streptococcus.

Routine blood tests were undertaken in an 81-year-old hypertensive woman with known impaired renal function. After discontinuation of a prolonged treatment with enalapril, plasma creatinine rose unexpectedly from 2 to 3.5 mg/dl over 3 weeks without an apparent cause (fig. 1). The patient was asymptomatic, afebrile and well hydrated, and physical examination was unremarkable. Urinalysis disclosed an unusually heavy, cream-colored sediment, exceeding 25% of the urine volume. It consisted of numerous WBCs, white cell casts and bacteria. Group B streptococci were grown in repeated urine cultures. Wright stain of the urinary sediment revealed predominance of polymorphonuclear cells, 6% eosinophils and 3% mononuclear and plasma cells. Small echogenic kidneys (long axis diameter of 7.6 and 8.3 cm) were demonstrated by sonography, without evident calculi, abscesses, papillay necrosis or urinary tract obstruction. A prolonged course of amoxicillin resulted in a rapid clearing of the urine and a prompt return of kidney function towards baseline values.

This patient presented with acute renal failure, induced by asymptomatic, group B streptococcus.

Amoxicillin
Enalapril

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\text{M. Mayer} & \text{Brezis}
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Fig. 1. Deterioration in kidney function during asymptomatic group-B streptococcal pyelonephritis, with amelioration following antibiotic treatment. The exceptionally asymptomatic presentation in our patient may reflect a reaction to an indolent infection by a rather rare pathogen of the urinary tract [3]. Thus, intrarenal low-grade infection may be under-recognized as a cause for rapid deterioration of kidney function [4] and, as illustrated by this case, should be suspected even in the absence of fever or relevant complaints, especially in the elderly [2, 5].

The rapid amelioration following treatment and the unusually heavy sediment and its constituents suggest that interstitial immunologic reaction to the infection and/or intraluminal tubular obstruction by white-cell casts may have contributed to the rapid deterioration in kidney function. Acute renal failure has rarely been encountered following uncomplicated acute pyelonephritis. The infective organism almost always has been Escherichia coli; the patients were often treated by nonsteroidal anti-inflammatory agents and frequently presented with fever or symptoms of urinary tract infection [2].


