Asymptomatic Group-B Streptococcal Pyelonephritis: An Unusual Cause of Acute Renal Failure

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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, papillary 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

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Fig. 1. Deterioration in kidney function during asymptomatic group-B streptococcal pyelonephritis, with amelioration following antibiotic treatment.

agents and frequently presented with fever or symptoms of urinary tract infection [2]. 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].

streptococcal urinary tract infection. The rapid amelioration following treatment and the unusually heavy sediment and its constituents suggest that interstitial immuno-logic 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

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