Letter to the Editor

Nephron 1996;74:446

Nephrotic Syndrome after Norfloxacin

B.		Hanson[a]
A.		D'Hondt[a]
M.		Depierreux[b]
F.		Lustman[a]

[a]Service de Médecine Interne, Centre Hospitalier Molière Longchamp, Bruxelles, [b]Service d'Anatomopathologie, Clinique César de Paepe, Bruxelles, Belgique

Dr. B. Hanson, Centre Hospitalier Molière Longchamp, 142, rue Marconi, B-1180 Bruxelles (Belgium)

Dear Sir,

Pure nephrotic syndrome after administration of norfloxacin has not been previously reported. We describe 1 case.

A 65-year-old woman with a history of hysterectomy and oophorectomy, late-onset diabetes, and rheumatoid arthritis had been taking indomethacin daily for 5 years. One week before admission, she was treated with norfloxacin, 800 mg daily, for a lower urinary tract infection for 3 days. On the 4th day, limb swelling and progressive breath-lessness were observed. Her general practitioner prescribed furosemide, amlodipine, and isosorbide dinitrate. The patient was seen on January 24, 1994, for the first time. Her physical examination was normal except obesity and bilateral lower limb pitting oedema. The BP was 18/10. Blood eosino-phils, Waaler-Rose test, hepatitis B surface antigen and antibody, ANCA, FAN, C3, C4, and antibasement antibody were normal. Proteinuria was 3.6 g/day on admission, but later reached 9.6 g/day. A renal biopsy specimen showed mild focal-segmental glomeru-losclerosis. The treatment consisted of cloni-dine, amlodipine, lisinopril, and diet. After the start of lisinopril treatment, proteinuria abruptly decreased to 3 g/day.

Follow-up showed progressive disappearance of the proteinuria. On May 2, 1994, proteinuria was equal to zero. At the patient's request, indomethacin was reinsti-tuted at the end of November, 1994. Protein-
uria did not recur. The serum creatinine level remained normal throughout this period. The patient was not rechallenged with norfloxacin.

Renal side effects of quinolones are infrequent. Acute renal failure has been reported and was attributed to either drug-induced tubulointerstitial allergic nephritis or crystal-luria [1, 2]. Nephrotic syndrome and acute renal failure have also been reported with ciprofloxacin in 1 patient [3]. Acute renal failure without proteinuria has been described in association with norfloxacin [4]. The histological appearance of the kidney could be linked with obesity only [5].

Calcium antagonists seem to protect the kidney, and converting enzyme inhibitors are able to decrease proteinuria [6]. The initial improvement of the nephrotic syndrome observed in our patient could have been related to the combined effect of two renal-protective drugs and the withdrawal of the causative agent.

In conclusion, a patient who had been treated with indomethacin for years without any renal toxicity developed a nephrotic syndrome after 3 days of norfloxacin treatment. Discontinuation of both drugs was followed by remission. Rechallenge with indomethacin did not trigger a relapse. This strongly suggests a causative role of norfloxacin in the nephrotic syndrome.

References

Hootkins R, Fenves AZ, Stephens MK: Acute renal failure secondary to oral ciprofloxacin therapy: A presentation of three cases and a review of the literature. Cin Nephrol 1989;32: 75-78.

Shibasaki T, Ishimoto F, Sakai O, Joh K, Aiza-wa S: Clinical characterization of drug-induced allergic nephritis. Am J Nephrol 1991;11:174-180.

Lo WK, Rolston KVI, Rubenstein EB, Bodey GP: Ciprofloxacin-induced nephrotoxicity in patients with cancer. Arch Intern Med 1993; 153:1258-1262.

Boelaert J, de Jeagere PP, Daneels R, Schurgers M, Gordts B, van Landuyt HW: Case report of renal failure during norfloxacin therapy. Clin Nephrol 1986;25:272.

Verani RR: Obesity-associated focal-segmental glomerulosclerosis: Pathological features of the lesion and relationship with cardiomegaly and hyperlipemia. Am J Kidney. Dis 1992;20:629-634.

Dworkin LD, Benstein JA, Parker M, Tolbert E, Feiner H: Calcium antagonists and converting enzyme inhibitors reduce renal injury by different mechanisms. Kidney Int 1993;43: 808-814.

KAHGER
E-Mail karger@karger.ch Fax+ 41 61 306 12 34 http://www.karger.ch