

Nephrotic syndrome following cefixime therapy in a 10-month-old girl: spontaneous resolution without corticosteroid treatment

Sir,

Acute interstitial nephritis with nephrotic syndrome has been reported with the use of different drugs such as non-steroidal anti-inflammatory drugs (NSAIDs), antibiotics, lithium, interferon, etc. A total or partial recovery is usually observed after withdrawal of incriminated drug. Antibiotic induced nephrotic syndrome is very rare [1,2]. We report an unusual case with nephrotic syndrome probably associated with cefixime therapy.

Case. A 10-month-old girl without any pathological history until she suffered from a burn on her right hand. The burn was second degree and the surface area was 3 cm². Her father was a physician and in order to prevent an opportunistic infection he gave her prophylactic cefixime (8 mg/kg/day, p.o.) for 8 days. Four days after withdrawal of cefixime she developed oedema of the eyelids and legs. Physical examination showed periorbital and pretibial oedema pitting in nature. Blood pressure was 90/50 mmHg. The laboratory tests gave following results: urine sterile, proteinuria 3.1 g/m²/day, urine protein/creatinine ratio 13, BUN 20 mg/dl, serum creatinine 0.3 mg/dl, ESR 70 mm/h, and the levels of the serum cholesterol, triglyceride, total protein and albumin were 250 mg/dl, 280 mg/dl, 4.1 g/dl and 2 g/dl respectively. C3 and C4 were normal, TORCH, hepatitis B and C tests were negative. Abdominal ultrasonography showed bilateral normal kidney and minimal ascites. Renal biopsy was not performed since the patient was 10 months old. Thus, minimal change nephrotic syndrome was diagnosed probably due to cefixime and only furosemid was administered 1 mg/kg/day, p.o. During the following days, oedema disappeared on the seventh day and urine was protein free on the eighth day of admission. The levels of serum proteins were normal on the fifteenth day of admission. She was asymptomatic with a 0.05 g/day proteinuria when she presented for the last consultation on October 1998.

Comment. Antibiotic induced nephrotic syndrome is very rare [1,2]. Concerning antibiotics involved in nephrotic syndrome, only two cases have been published on ampicillin

[3,4], and one case each on amoxicillin [1], rifampicin [5] and norfloxacin [6]. In all these cases, a total or partial recovery was observed after withdrawal of the incriminated drug. Cefixime, a third generation cephalosporin, has excellent antibacterial activity and is a viable alternative to penicillin for infants and children with upper respiratory tract infections [7]. To our knowledge, this is the first report of nephrotic syndrome following oral administration of cefixime. Interestingly we observed total recovery after withdrawal of cefixime without prednisolone treatment. In the literature all the cases of antibiotic induced nephrotic syndrome were above 40 years of age. Our patient is the youngest case in the reported patients. We cannot exclude a fortuitous nephrotic syndrome not related to cefixime. However, the timing of the nephrotic syndrome and the resolution of the nephrotic syndrome after withdrawal of the drug, strongly favours a causative relationship, but one cannot exclude coincidence and unfortunately we do not have a renal biopsy.

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