Acute Renal Failure Complicating Nonfulminant Hepatitis A in Childhood

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Dear Sir,

Acute renal insufficiency complicating acute viral hepatitis A is unusual in the absence of fulminant liver failure. We are aware of approximately 20 such cases [1-8]. Most cases presented with sterile pyuria, mild proteinuria and glucosuria, therefore suggesting interstitial nephritis [2-7]. Some cases, however, presented with severe proteinuria and overt nephrotic syndrome [1, 8]. Most reported patients were adults. This age distribution appears surprising, since hepatitis A is an endemic disease in many countries, the population becoming often infected at a young age [9, 10]. We report here a child with mild viral hepatitis A complicated by acute renal failure not requiring dialysis.

A previously healthy 11-year-old girl was referred with a 5-day history of anorexia. On admission she was well hydrated, fully conscious and jaundiced. Body temperature was 38.3 °C, sitting heart rate 96/min, sitting blood pressure 129/84 mm Hg with no postural drop. The liver was enlarged 5 cm below the costal margin. The further clinical examination was noncontributory. Laboratory findings were: sodium, 131 mmol/l; potassium, 5.0 mmol/l; chloride, 97 mmol/l; pH 7.40; carbon dioxide tension, 36.3 mm Hg; bicarbonate, 21.6 mmol/l; glucose, 5.36 mmol/l; albumin, 26 g/l; urea 13.6, mmol/l; creatinine, 184 µmol/l; alanine aminotransferase, 1,280 U/l; aspartate aminotransferase, 396 U/l; alkaline phosphatase, 378 U/l; γ-glutamyltranspeptidase, 179 U/l; total bilirubin, 196 µmol/l; direct bilirubin, 73 mmol/l. Complete blood count, lipase, α-amylase, ammonia, ceruloplasmin, prothrombin time, thrombin time, activated partial-thromboplastin time and fibrinogen were within normal ranges. IgM antihepatitis A antibodies were strongly positive, while serology for hepatitis virus B and C, cytomegalovirus, Epstein-Barr virus and Leptospira was negative. Urinalysis revealed sterile leukocyturia, glucosuria +, mild proteinuria of 8.8 mg/[m² • h] and a sodium concentration of 51 mmol/l. The diagnosis of interstitial nephritis was made. The disease course (fig. 1) was favorable and dialysis was not required.

As to our knowledge this is the fourth description of a child with renal failure complicating nonfulminant hepatitis A. The disease in our patient was very mild and benign. Since renal function is not routinely monitored in children with symptomatic hepatitis A, we speculate that mild renal failure complicating nonfulminant hepatitis A may often be overlooked.

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200 Ψ

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300

100

S 200

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E 100

20

10 Day

Fig. 1. Course of plasma total bilirubin and creatinine concentrations in the 11-year-old patient with hepatitis A and renal fail-

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