Renal involvement of inflammatory bowel diseases in children and adolescents: from Korean pediatric IBD cohort

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Objectives: Recently, the incidence of inflammatory bowel disease (IBD) is increasing rapidly and there have been reported various kinds of renal complications. This study was to evaluate the clinical manifestations of renal complications in children with IBD.

Methods: We retrospectively reviewed the medical records of 456 children and adolescents younger than 20 years who had been diagnosed with IBD in Kyungpook National University Hospital and Samsung Medical Center since 2000. And we examined the clinical features of kidney and lower urinary tract symptoms.

Results: A total of 456 IBD patients participated in the study (male 65.6%, female 34.4%). There were 346 Crohn's disease and 110 ulcerative colitis patients. There were 26 cases (38.8%) of isolated hematuria, 30 cases (44.8%) of isolated proteinuria, and 11 cases (16.4%) of hematuria and proteinuria simultaneously. In the evaluation of causes of hematuria and proteinuria, 1 case of ureter stone and 1 case of hydronephrosis were found. A total of seven patients underwent renal biopsy. All of them were children with Crohn's disease. Five patients had both microscopic hematuria and proteinuria. Two patients had persistent microscopic hematuria and recurrent gross hematuria. Histopathologic examination revealed IgA nephropathy in 5 patients (71.4%) and HSP nephritis in 1 patient (14.2%). One patient (14.2%) had no pathologic abnormalities. The disease activity of IBD in all patients was mild and well-controlled. Also there are no correlations between the IBD activity and the presence of renal symptoms in 102 patients who were able to identify disease activity.

Conclusions:

The incidence of renal symptoms in children with IBD was 14.7%, which was significantly higher than that of normal children in Korea. Children with IBD are more likely to show renal symptoms than healthy children and adolescents. Therefore, regular urine screening and evaluation of renal function are necessary for early detection of renal complications.