Turk J Gastroenterol *2014; 25: 739-40*

Abdominal pain developing from a polyarteritis nodosa-induced hepatic aneurysm

To the Editor,

Systemic polyarteritis nodosa (PAN) is characterized by necrotizing inflammatory changes in medium and small-sized arteries (1). Because the range of symptoms is a wide and no specific serological test exists, diagnosis of PAN could be difficult. Gastrointestinal systems such as the liver, appendix, and gallbladder are rarely affected (2). A 9-year-old female patient was admitted with severe abdominal pain that started 15 days previously. She has a tenderness in the epigastric region. However, other systemic examinations were unremarkable. Laboratory values were as follows: hemoglobin, 11.2 g/dL; white blood cell count, 22,200/mL; platelet count, 663,000/mL; erythrocyte sedimentation rate, 84 mm/h; and C-reactive protein, 156 mg/dL (normal range, 0-5). Serum fibrinogen level was 468 mg/dL (normal range, 18-350 mg/dL) and ferritin level was 558.9 ng/mL (normal range, 7.0-276.8 ng/mL). Antinuclear antibody, antineutrophil cytoplasmic antibody, anticardiolipin antibody, lupus anticoagulant, and Hepatitis B surface antigen were negative. A gastroscopy showed normal findings. Abdominal ultrasonography revealed a large number of micro-aneurysmal dilatations in the liver. Magnetic resonance imaging (MRI) angiography showed multiple arterial microaneursyms and ruptured thromboses in the liver (Figure 1). These imaging findings were consistent with PAN. A diagnosis of PAN with hepatic involvement was established based on clinical and imaging findings. Combined therapy consisting of prednisone (2 mg/kg/day), cyclosporin A (CPA) (1000 mg/m^2/month, total six doses) and azathioprine (75 mg/day) was started. Her symptoms began to decline for the next 10 days, and at the control abdominal MRI angiography at the end of four months we observed that microaneursyms disappeared (Figure 2). The typical presentation of PAN in children is of isolated organ involvement with constitutional symptoms. But multiple organ systems could be involved in systemic PAN (3). Although involvement

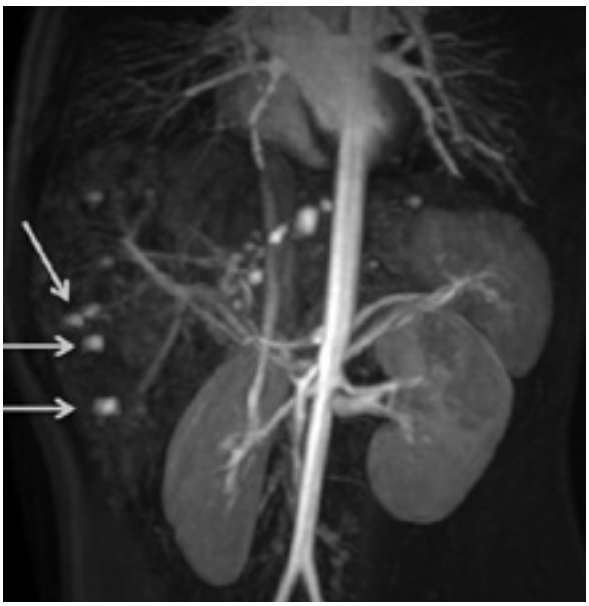

Figure 1. MR imaging angiography reveals multiple arterial microaneursyms in the liver (contrast enhanced 3D TOF)

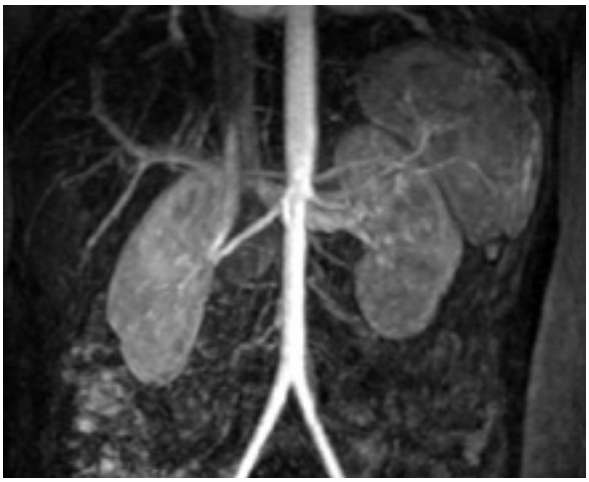

Figure 2. Control abdominal MRI angiography reveals microaneursyms disappeared (contrast enhanced 3D TOF).

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Received: September 27, 2014 **Accepted:** October 19, 2014

of hepatic and gastrointestinal tract arteries has also been reported, hepatic involvement and hepatic aneurysm rupture are rarely detected in childhood series (4). Hepatic involvement with mesenteric and kidney vessels has been reported; however, our patient had only hepatic involvement. Our patient responded well to treatment with corticosteroids, CPA, and azathioprine. Her symptoms began to decline for the next 10 days, and at the control abdominal MRI angiography at the end of four months we observed that microaneursyms disappeared. In conclusion, our case represents an unusual complication of gastrointestinal-involved PAN.

Informed consent was obtained from the patient's family.

Ethics Committee Approval: Ethics committee approval was received for this case.

Informed Consent: N/A.

Peer-review: Externally peer-reviewed.

Author contributions: Concept - Ö.F.B., M.E., Ö.K.; Design - M.E., Ö.Y., Ö.F.B.; Supervision - Ö.Y., Ö.K.; Resource - H.K., M.E.; Materials - M.E., H.K., R.A.; Data Collection&/or Processing - Ö.F.B., M.E.; Analysis&/or Interpretation - M.T., R.A., M.E.; Literature Search - Ö.Y., Ö.F.B., M.E.; Writing - M.E., Ö.F.B., Ö.Y.; Critical Reviews - Ö.F.B., Ö.K., Ö.Y.

Conflict of Interest: No conflict of interest was declared by the authors.

Financial Disclosure: The authors declared that this study has received no financial support.

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