TUBULOINTERSTITIAL NEPHRITIS AND ACUTE KIDNEY INJURY DUE TO SIMULTANEOUS HANTAAN AND PARVO B19 VIRUS INFECTION

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This is a case of a 41-year-old male previously healthy patient who developed AKI due to a dual viral infection. The present illness started as a fever of 38 ◦ C, weakness, muscle pain, inappetence, oliguria, and hypertension. He was a Bosnian on temporal work in Croatia with the hobby of hunting in Bosnian woods.

Laboratory findings revealed slightly elevated leukocytes 10.1x109/L with 5% of atypical lymphocytes and no other abnormality of a peripheral blood smear, mild normocytic anemia, and regular thrombocytes. Creatinine was 1032 µmol/L without electrolyte disturbances. Hepatic markers were regular, with a mild elevation of LDH (270 U/L), sedimentation (72 mm/3.6 ks), and CRP 28.8 mg/L. Urine analysis revealed proteinuria 2+, erythrocyturia 1+, leukocyturia, and granular casts. The immunological panel was negative. In daily urine, there were 221 mg of proteins and normal β2M and α1M. Ultrasound presented swollen kidneys and splenomegaly.

A kidney biopsy set the diagnosis of acute interstitial nephritis. The light microscopy showed edematous interstitium with lymphocyte and plasma cell infiltration. There were no IgA, IgM, IgG, Cq1, C3, C4, kappa, and lambda light chain deposits. Electron microscopy revealed an open lumen of capillaries, lined with neat endothelial cells. Only in a few lumens, there was an initial collapse with the folding of the glomerular basement membrane. GBM on average measured 362 nm, 226 - 531 nm, SD 84 nm. Podocytes had a regular ultrastructure and preserved legs. The mesangial areas were wider due to the increased amount of mesangial matrix. Immune deposits were not found. Tubules were regular or atrophic.

He was treated with methylprednisolone of 80 mg/day tapering through two months. After three days kidney function recovered with diuresis of 5500 ml/day. Finally, microbiological tests have shown simultaneous acute Parvo B19 and Hantaan virus infection, but with good therapeutical success.