

KETOROLAC INDUCED MINIMAL CHANGE DISEASE

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Introduction: Commonly reported renal complications of non-steroidal anti-inflammatory drugs include acute renal failure and/or acute interstitial nephritis; in rare cases a nephrotic syndrome was also observed. Minimal change disease and acute tubular necrosis were also described in rare cases. We report patient with acute tubulointerstitial nephritis and minimal change disease caused by ketorolac.

Case report: Male patient, 24 years old, treated for 5 days with intravenous ketorolac in a standard dose, because of pain in the lumbosacral part of the spine, with confirmed discopathy, without other chronic or hereditary illnesses, developed hypertension and severe peripheral edema shortly after ketorolac administration. His serum creatinine was in referent range, renal function was in hyper filtration and proteinuria was in nephrotic range, 23,25 gr/24h, followed by hypoproteinemia and hypoalbuminemia, with body fluid overload of 18 kg and conserved urine output with polyuria. We performed kidney biopsy. On light microscopy in the interstitium, focal clusters of mononuclear cells were observed, with a few neutrophils, along with the penetration of inflammatory cells into the canaliculi walls on few sites (figure 1.). Tamm-Horsfall's protein was found in the lumen of the some tubules. The glomeruli were normal, with delicate basement membranes and no hyper cellularity. Moderately abundant deposits of IgM were found in the mesangium by immunofluorescence. Serum IgA, IgG, C1q, C3, fibrin, kappa and lambda chains were negative. In the findings of electron microscopy, podocytes showed a complete loss of foot processes and several mononuclear inflammatory cells in the interstitium.

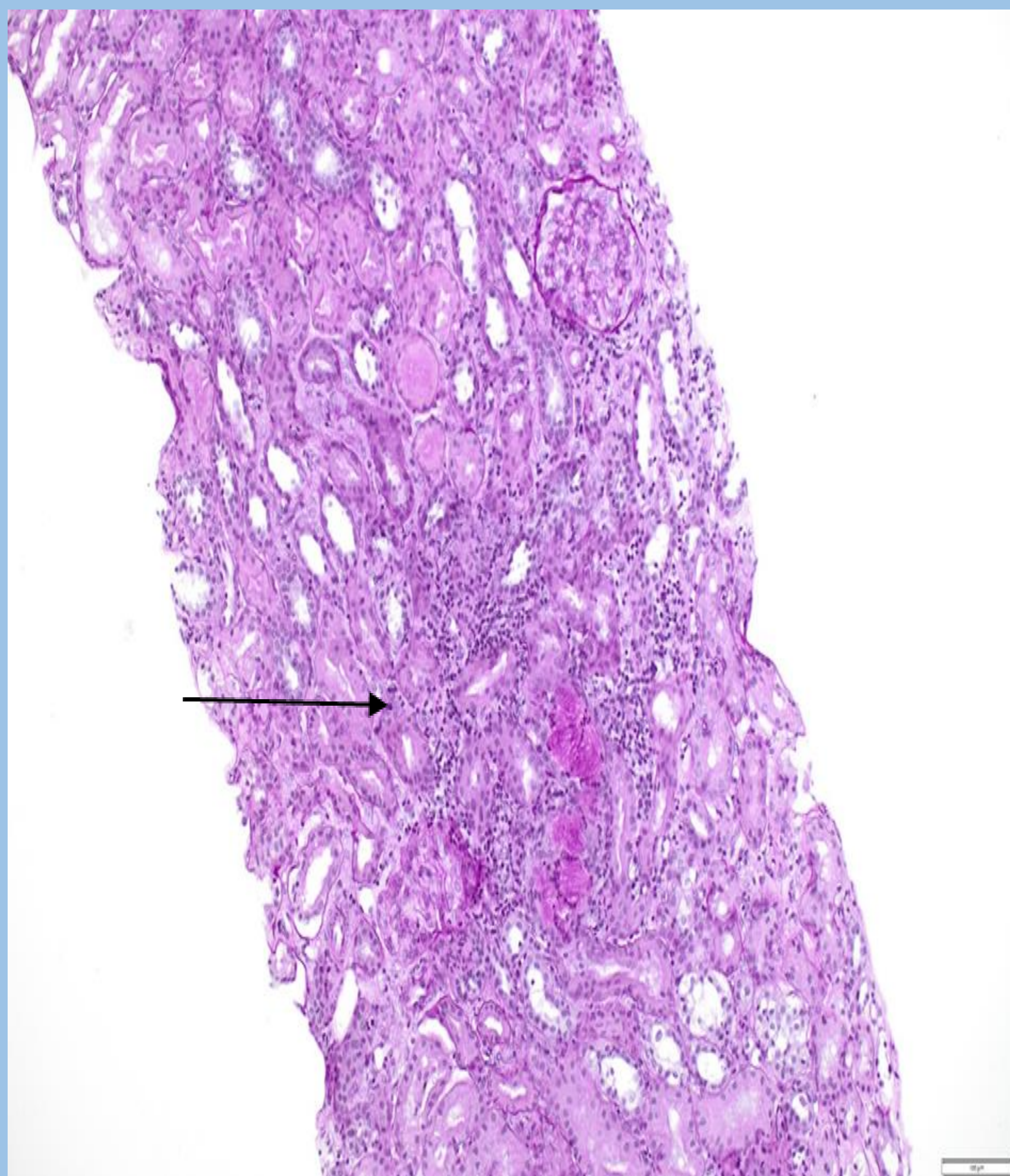


Figure 1. Focal interstitial infiltrate of mononuclear cells (arrow). The glomerulus is well preserved with no evidence of proliferation or inflammation. (PAS stain, original magnification $\times 100x$).

Conclusion: histopathological finding is referable primarily to drug-induced minimal change disease. Patient was treated with symptomatic therapy with full clinical recovery in two weeks.