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On the Cover
A 39 year old woman with a history of hypertension presented with fever, oral ulcers, loose stools and abdominal pain. She had pancytopenia (hemoglobin - 8 g/dl, WBC - 500/μL, platelets - 16,000/μL) and renal dysfunction requiring dialysis support. Infectious and autoimmune work-up were non-diagnostic so a renal biopsy was performed. Histological examination revealed a dense interstitial infiltrate with cells of three distinct lineages including myeloid and erythroid cells and megakaryocytes, consistent with extramedullary haematopoiesis (EMH). Glomeruli and blood vessels were unremarkable but tubular epithelial cell injury was noted. EMH is the development of hematopoietic tissue outside the bone marrow and is most commonly seen in the liver, spleen and lymph nodes, but is rarely seen in the kidney. Renal involvement can be parenchymal, intrapelvic or perirenal in location and is usually asymptomatic. In the parenchymal type, the kidney may be diffusely enlarged or have a focal mass. Intrapelvic involvement is usually an extension of a parenchymal lesion and the EMH tissue can cause obstructive renal failure. In the perirenal type, the hematopoietic tissue encases the kidney. Renal EMH typically occurs in association with a chronic hematological disorder. The pathophysiology of EMH in the kidney is not fully understood. It has been hypothesized that hematopoietic cells are derived from local mesenchymal pluripotent cells which then proliferate in response to a stimulating factor. The optimal treatment is unknown. Image and text provided by Anila Kurien, Center for Renal and Urological Pathology, Chennai, Tamil Nadu, India and Goutham Seralathan, G Kuppuswamy Naidu Memorial Hospital – Nephrology Chennai, Tamil Nadu, India.