

# LENTIFORM FORK SIGN ON MRI IN A PATIENT ON CONTINUOUS AMBULATORY PERITONEAL DIALYSIS

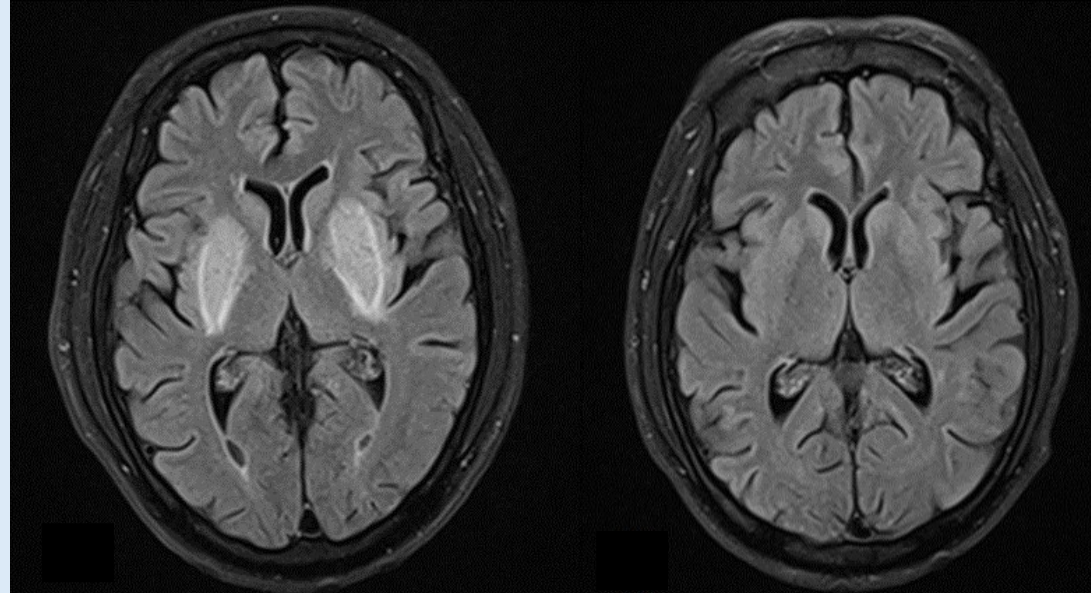
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## Case Presentation

A 43-year-old male, known case of chronic kidney disease, type 2 diabetes, hypertension and status post below knee amputation who is on continuous ambulatory peritoneal dialysis (CAPD) for past 5 months presented with giddiness, easy fatiguability, anorexia and drowsiness. Lab investigations revealed elevated levels of creatinine 14 mg/dl, BUN 41 mg/dl, urea 236 mg/dl and HbA1C 8.7 with elevated fasting and postprandial blood glucose levels. All the causes for peripheral vertigo were ruled out after which the patient was subjected to MRI brain (plain).

## Radiological findings / Results

The MRI (plain) of brain revealed symmetrical FLAIR hyperintensities in bilateral basal ganglia with a hyperintense rim outlining the lentiform nucleus distinctly suggestive of lentiform fork sign implicating uraemic encephalopathy as the clinical diagnosis. After appropriate management there is complete resolution of the basal ganglia FLAIR hyperintensities along with symptomatic resolution.



MRI at presentation

MRI at follow up

## Discussion

Lentiform fork sign is a neuroradiological sign indicative of oedema of basal ganglia which is associated with methanol and ethanol poisoning, diabetic ketoacidosis, metformin toxicity, uraemic encephalopathy and dialysis disequilibrium syndrome. This radiological sign is manifested by metabolic acidosis of varied etiologies and is considered as major player in the pathogenesis of these basal ganglia hyperintensities. Metabolic acidosis, retention of uraemic toxins, renal failure and poor glycaemic control causes the endothelial dysfunction and lead to damage of globus pallidus and putamen which maybe the reason for peculiar appearance of the basal ganglia.

## Conclusion

Lentiform fork sign on MRI can help to diagnose uremic encephalopathy and also is useful to assess the response to treatment.