LETTER TO THE EDITOR

Revisiting "INH-induced Encephalopathy in a Patient of CKD"

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Sir,

While going through this case on isoniazid (INH)-induced encephalopathy I felt there were some discrepancies and gaps in the evaluator process and management, which should be considered in any patient of chronic kidney disease (CKD) wit h altered sensorium.

As this patient already had baseline CKD, antituberculosis drugs (ATD) dose modification is indicated to avoid any untoward adverse effects. As during the ATD introduction, her baseline serum creatinine was 6 mg/dL and she underwent cervical spine intervention, she should have been provided dialytic support before the procedure. As she developed further worsening of renal function after intervention and improvement noted after dialytic support, this episode of altered mentation can also be attributed to uremic encephalopathy. In this article, however, there is no mention of this possibility.

Any episode of altered mentation in such a patient mandates evaluation by neuroimaging and cerebrospinal fluid (CSF) study to rule out any structural central nervous system (CNS) disease and also CNS tuberculosis (TB). Uremic encephalopathy is also a strong possibility when a patient with serum creatinine develops altered sensorium. Other causes of altered sensoria, like seizure disorder should also be entertained and ruled out before attributing this episode to INH-induced encephalopathy.

As CKD is a state of immune dysfunction, patients with CKD are at high risk for the development of TB. The diagnosis of TB in these patients is challenging as they show many atypical symptoms and increased prevalence of extrapulmonary TB. We should be very careful regarding the dosing of ATD with strict monitoring of specific adverse effects. The standard first-line drugs used in the general population should also be used in patients with renal dysfunction. Regarding dose modification, INH and rifampicin undergo predominant hepatic clearance, hence no dosage adjustment necessary in presence of renal dysfunction. Ethambutol and some metabolites of pyrazinamide undergo renal excretion, hence standard guidelines, like BTS guidelines recommend thrice-weekly administration of these two drugs in standard dosage form instead of daily dosing. Patients on rifampicin should also be looked after for any possible drug–drug interaction in case of concomitant therapy with antibiotics/antiepileptics or immunosuppressants. During serial reintroduction, it has been mentioned that her consciousness deteriorated after the introduction of INH and ethambutol mandating discontinuation of both of them, ethambutol was re-introduced again but this was not followed in the case of INH. But the specific reason has not been mentioned.

INH is a very important component of a multidrug ATD regimen. It is bactericidal, highly efficacious, and leads to rapid bacillary clearance. Hence, INH-induced encephalopathy, if at all occurs is rarely an indication of permanent withdrawal of the drug.

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