

Diagnostic Delays and Treatment Dilemmas: A Case of Drug-Resistant HIV and Tuberculosis

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Abstract : Introduction: We report a case of delayed diagnosis of extra-pulmonary INH-mono-resistant Tuberculosis (TB) in a South African patient with drug-resistant HIV. Case Presentation: A 36-year old male was initiated on 1st line (NNRTI-based) anti-retroviral therapy (ART) in September 2009 and switched to 2nd line (PI-based) ART in 2011, according to local guidelines. He was following up at the outpatient wellness unit of a public hospital, where he was diagnosed with Protease Inhibitor resistant HIV in March 2016. He had an HIV viral load (HIVVL) of 737000 copies/mL, CD4-count of 10 cells/ μ L and presented with complaints of productive cough, weight loss, chronic diarrhoea and a septic buttock wound. Several investigations were done on sputum, stool and pus samples but all were negative for TB. The patient was treated with antibiotics and the cough and the buttock wound improved. He was subsequently started on a 3rd-line ART regimen of Darunavir, Ritonavir, Etravirine, Raltegravir, Tenofovir and Emtricitabine in May 2016. He continued losing weight, became too weak to stand unsupported and started complaining of abdominal pain. Further investigations were done in September 2016, including a urine specimen for Line Probe Assay (LPA), which showed M. tuberculosis sensitive to Rifampicin but resistant to INH. A lymph node biopsy also showed histological confirmation of TB. Management and outcome: He was started on Rifabutin, Pyrazinamide and Ethambutol in September 2016, and Etravirine was discontinued. After 6 months on ART and 2 months on TB treatment, his HIVVL had dropped to 286 copies/mL, CD4 improved to 179 cells/ μ L and he showed clinical improvement. Pharmacy supply of his individualised drugs was unreliable and presented some challenges to continuity of treatment. He successfully completed his treatment in June 2017 while still maintaining virological suppression. Discussion: Several laboratory-related factors delayed the diagnosis of TB, including the unavailability of urine-lipoarabinomannan (LAM) and urine-GeneXpert (GXP) tests at this facility. Once the diagnosis was made, it presented a treatment dilemma due to the expected drug-drug interactions between his 3rd-line ART regimen and his INH-resistant TB regimen, and specialist input was required. Conclusion: TB is more difficult to diagnose in patients with severe immunosuppression, therefore additional tests like urine-LAM and urine-GXP can be helpful in expediting the diagnosis in these cases. Patients with non-standard drug regimens should always be discussed with a specialist in order to avoid potentially harmful drug-drug interactions.

Keywords : drug-resistance, HIV, line probe assay, tuberculosis

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