

A Case Report of Anti-Tubercular Treatment Induced Acute Liver Failure Intubercular Lymphadenitis

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Abstract: ANTI-TB drugs are one of the commonest group underlying idiosyncratic hepatotoxicity worldwide. Reported in 5%-28% of people treated with anti-TB Drugs. Majority of the reports have used an elevated alanine (ALT) or aspartate transaminase (AST) of 3 times upper limit of normal range (ULN) with symptoms (abdominal pain, nausea, vomiting, unexplained fatigue or jaundice) attributable to liver injury or 5 times ULN of ALT or AST without symptoms to define hepatotoxicity. The median interval from treatment initiation of drug to development of clinical symptoms is 16 weeks (range 6 weeks-6 months). In a meta-analysis, isoniazid was more likely to be associated with hepatotoxicity (odds ratio (OR) 1.6) even in the absence of Rifampicin, but the combination of these two drugs was associated with higher rate of hepatotoxicity (or 2.6) when compared to each drug on its own. They found that the incidence of clinical hepatitis in adults with isoniazid alone was 0.6%, with multidrug isoniazid regimens without rifampicin 1.6% and with regimens containing rifampicin and not isoniazid 1.1%. Here we are sharing a case report of our patient who presented to us after 1 month of treatment initiation.

Keywords: Anti-TB Drugs, Hepatitis, Hepatotoxicity, TB Lymphadenitis, Transient Elevation of Liver Enzymes

1. Case Report

A 28-year-old female, who was a known case of hypothyroidism and cervical tubercular lymphadenitis on anti-tubercular treatment (ATT) Since the past 1 month presented to us with chief complaints of generalised weakness, fever with rash since the past 1 week. On examination, multiple non-tender matted lymph nodes were palpable on her supraclavicular region and systemic examination was within normal limits.

ATT was withheld and treatment continued with other supportive measures-antibiotics, antihistamines, antipyretics, IV fluids. Investigations showed elevated AST (>3 times the ULN) and other parameters were within normal limits. Ultrasound abdomen showed mild hepatomegaly.

She was given a challenge dose of rifampicin 150mg once daily dosage for 1 week post admission after her liver function tests (LFT) returned to normal ranges. However, she again developed rashes and her LFT was in rising trend and hence it was withdrawn.

Later, she developed thrombocytopenia with deranged coagulation profile for which fresh frozen plasma (FFP) transfusion was given. She became irritable, agitated 9 days

post admission and was shifted to ICU for critical care support.

The physician opinion was sought and anti-encephalopathic measures were started with antibiotics (rifaximine), laxative (syp.lactulose). Ophthalmology opinion revealed a normal fundus examination. Computed-Tomography (CT) head was done and was within normal limits.

She was put on mechanical ventilation following intubation. She also required inotropic support and later succumbed to her illness 28 days post admission.

	9/2/22	26/2/22	1/3/22	5/3/22
HB	10.7	10.8	9.9	9
TC	8100	20,800	11,400	13,700
PLT	1.24 L	56,000	1.2 L	1.99 L
UREA/ CREAT	22 / 1.1	24 / 0.8		11 / 1
TB/DB	0.3	5.6 / 3.3	9.3 / 3.5	17.6 / 4.8
AST	508	3321	257	43
ALT	127	2851	754	343
ALP		118		
LDH	1282	1754	579	861

2. Discussion

Hepatotoxicity due to anti-tubercular treatment (ATT) should be dealt with proper attention and plan. The hepatotoxicity ranges from a transient elevation of liver enzymes to a phase of acute liver failure. Proper counselling of the patient and their relatives regarding the anti-tubercular therapy should be done so that the patient gets the right drugs at the right time with the right dosage and with adequate precaution.

Re-introduction of drugs should also be meticulously planned and it should contain more of a gradual increase in the doses so that the patient gets adequate time to get adapted to the treatment. Finally in cases of liver failure, liver transplantation is the definitive treatment that may provide a favourable outcome.

3. Conclusion

- 1) Patients on ATT should be kept on a regular follow up to monitor for the various side effects of ATT drugs.
- 2) Liver function tests should be ordered at adequate intervals if the need arises.
- 3) Proper counselling proves to be an effective strategy in helping the patient gets a better knowledge regarding his/her treatment.
- 4) Access to a health care facility must be ensured when the patient feels any difficulty with his/her treatment.
- 5) Active participation from care takers, family members and community health workers should be emphasised to help the patient complete his/her treatment successfully.

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