

A CASE REPORT ON ANTI -TUBERCULAR THERAPY INDUCED HEPATITIS

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ABSTRACT

Modern day drug therapy for the control of pain has made great strides in the recent past. Nevertheless, adverse drug reactions, although rare, still remain a major threat to the patient welfare. The drugs involved in the DOT'S therapy (Isoniazid, Rifampicin, Pyrazinamide & Ethambutol) are the most commonly used agents to treat Tuberculosis. But Adverse drug reactions caused by these agents is one of the major concern. It possesses a formidable socio-economic burden on the individual and on the society. Among all ADRS 75 to 80% are classified into type A (predictable) where as 20-25% as type B (unpredictable). I here present a case of 32 years old female patient who was alleged with anti tubercular therapy and presented with complaints of Loss of appetite, Itchy skin, Facial edema and Fever with jaundice, the patient went to local hospital and was further referred to Tertiary Care Teaching Hospital and was diagnosed as Drug induced Hepatitis (Anti Tubercular Therapy) and further management was given to the patient and her condition was improved at the time of discharge. The ultimate goal is always to discontinue the offending medication if possible. Once the offending drug has been identified, it should be promptly discontinued.

KEYWORDS: Anti tubercular therapy, Adverse drug reactions, Patient welfare, Hepatitis.**INTRODUCTION**

Tuberculosis infected individuals are treated by a combination of four drugs i.e., Isoniazid, Rifampicin, Pyrazinamide and Ethambutol.^[1] However, a variety of adverse drug reactions of these drugs have been reported, one of the well-known toxic effect is Hepatitis.^[2] Inflammation of the liver due to an adverse reaction with a drug is called drug induced hepatitis.^[3] It is a redness, inflammation of the liver that is caused by a harmful (toxic) amount of certain medicines and is an important cause of acute liver injury, accounting for approximately 10% of all cases of Acute Hepatitis.^[4,5] It has an incidence of 14 to 19 cases/1lakh persons.^[6] It possess a formidable socio-economic burden on the individual and on the society.^[7] The symptoms include fever, rash, flu like symptoms, loss of appetite, vomiting, joint pains, Jaundice. However, each individual may experience different symptoms.^[8] Drugs causing Hepatitis are Analgesics and Anti Pyretics that contain Acetaminophen are a common cause of liver inflammation. Other drugs include Isoniazid, General Anaesthetic (Halothane), Methyldopa, Methotrexate, Statins.^[9] Adverse drug reactions, although rare, still remain a major threat to the patient welfare. Among all adverse drug reactions 75-80% are classified into type – A (predictable) whereas 20-25% as type-B (unpredictable).^[10]

CASE REPORT

A 32years female patient was admitted in the department of Neurology, in Tertiary Care Teaching Hospital, Tirupati on 13 December 2019 with chief complaints of decreased appetite, Itchy skin, facial edema, and fever with Jaundice. After 2 weeks of starting Anti Tubercular Therapy initially the patient had sudden onset of deviation of angle of mouth to left side associated with tonic-clonic movements of upper and lower limbs, loss of consciousness duration of 5 mins. Then patient got admitted in a local Hospital in Tirupati. On undergoing MRI scan showed right Frontal Tuberculoma and started Anti epileptics (Tab. LEVERA 500mg BD) and Anti Tubercular Therapy (ISONIAZID, RIFAMPICIN, PYRAZINAMIDE, and ETHAMBUTOL) and patient was further referred to Tertiary Care Teaching Hospital for further management. She is a known case of Generalized Tonic-Clonic Seizures since 2 years. She was under regular medication. Based on medication history (Anti tubercular therapy) the physician suspected Drug Induced Hepatitis (Isoniazid, Rifampicin, Pyrazinamide). After confirmation of drug induced hepatitis, the physician removed Isoniazid, Rifampicin, and Pyrazinamide and added Tab. Ethambutol -800 mg OD and Inj. Streptomycin 750mg IM OD.

On Day 1-3: The patient had c/o loss of appetite, itchy skin, facial edema, and fever with jaundice and the patient vitals were Temp-102°F, BP-90/60mm of Hg, PR-110beats/min. The elevated parameters are SGOT, SGPT, Total Bilirubin, Conjugate Bilirubin for which he was treated with the following medication Tab.UDILIV-300mg BD, Tab.DOLO-650mg SOS and the following drugs are given as supportive therapy Inj.XONE-2gm IV OD, Inj.PANTOP-40mg IV OD, Inj.EMESSET-4mg TID, IVF-3 pint@100cc/hr, Tab.LEVOFLOXACIN. On the second and third day the patient had c/o Fever spikes, Body pains and on examination patient is conscious and coherent. She was treated with similar treatment as above and the physician advised Syp. Sucralfate TID and IVF -4pint NS, 2pint RL@125 cc/hr.

ON DAY 4-5: The patient had c/o Hyperpigmentation of palate and was treated with Inj. DEXAMETHASONE 8mg IV BD. Her vitals were Temp-101°F, BP-100/60mm of Hg, PR-20beats /min and elevated parameter is Total bilirubin-0.4mg/dl and patient was advised to continue same treatment along with, Tab. ISONIAZID 300mg OD which was re added by the physician.

ON DAY6-8: The patient vitals were Temp-102°F, BP-100/70mm of Hg, PR-114beats/min and was advised to stop Tab.UDILIV because the patient laboratory parameters were found to be normal and Inj.XONE,

Tab.DOLO were also advised to stop and to continue rest of the drugs and advised with Inj.PARACIP 1gm IV SOS, Inj.CLINDAMYCIN 600mg IV BD, Inj.PIPTAZ-4.5gms IV TID + 100ml NS, and Inj. Noradrenaline 8mg+50ml NS@5cc/hr was given to the patient as there was no improvement in BP from the day1.

ON DAY9-13: The patient had no fresh complaints and the elevated parameters were Total Bilirubin, Direct Bilirubin, and Indirect Bilirubin. Hence the patient was advised to continue the same medication along with Tab.UDILIV -300mg.

ON DAY14: The patient condition was recovered and the decreased parameters were Total Bilirubin, Conjugate Bilirubin, SGOT, SGPT and was discharged with the following medication, Tab.ETHAMBUTOL-800mg OD, Tab.LEVOFLOXACIN-750mg OD, Inj.STREPTOMYCIN-750mg IM OD, Tab.LEVERA-500mg, Tab.PREDNISOLONE-10mg OD, Tab.NUSAM-400mg BD, Tab.UDILIV-300mg.

First Follow Up: After two weeks the patient came for follow up and her liver function test parameters were found to be normal.

Table: Laboratory Parameter of the Patient.

Parameters	Observed Values	
	Day1	Day2
LFT		
Total. Bilirubin	2.2mg/dl	0.4mg/dl
Conj. Bilirubin	0.7mg/dl	0.1mg/dl
SGOT	244IU/L	27IU/L
SGPT	197IU/L	21IU/L
RFT		
Sr.Creatinine	0.64mg/dl	
Sr.Urea	20mg/dl	
Complete Blood Picture		
Hb	9.8gm/dl	10.1gm/dl
PCV	8.2	8.3
ESR	40mm/1 st hr	30mm/1 st hr

DISSCUSSION

Adverse drug reactions affect up to 10% of population and in hospitalized patients this figure increases up to 20%. Adverse drug reactions with anti tubercular therapy may be immediate or delayed type, but their frequency and severity are very rare. Although the incidence is rare, the physician's should be aware of such reactions before prescribing Anti Tubercular Therapy.^[11] Physician's writing prescription for their patients must warn them about possible adverse drug reactions.^[12] Once the offending drug has been identified, the ultimate goal is to discontinue the drug. In this case, the condition of the patients started subsiding after modification of the Anti-

Tubercular Therapy. The goal of treatment for drug induced hepatitis is to discontinue taking the causative agent and monitor the liver closely while it recovers. Diagnostic procedures for drug induced hepatitis may include some specific laboratory tests, such as liver function test, cellular blood count etc.^[13] Early diagnosis with the prompt recognition and withdrawal of all potential causative drugs is essential for a favorable outcome.^[14] In our case the patient with drug induced hepatitis was treated with Tab. UDILIV 300mg (Ursodeoxycholic acid). Gradually the patient condition was improved after two weeks of therapy. After first follow up the patient laboratory parameters were found to be normal and hence she is doing well.

CONCLUSION

Hence, it is very important to draw attention of all health care workers towards adverse effects of Anti Tubercular Drugs which can be harmful to the patients. Patients taking Anti Tubercular Drugs should be followed bio-chemically more frequently during the initial phase of treatment than during the continuous phase. Health care providers must be careful regarding the adverse effects of the drugs. The most commonly and widely prescribed drugs should also be used judiciously and continuously monitored to prevent such adverse drug reactions. In conclusion, this report suggests that clinical providers should be aware of these reactions; hence use Evidence Based Algorithms to help determine medication causality and document the reaction clearly in the Electronic health record.

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