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CASE REPORT ON ANTI-TUBERCULAR DRUGS INDUCED GASTRITIS

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ABSTRACT

Tuberculosis is one of the most pressing health problems, with India being the highest TB burden country. A case of 46 years old man, weighing 35 kg, brought to hospital with the chief complains of generalized weakness, nausea, vomiting (multiple episodes), fever (on/off), acidity, sour throat, indigestion of food & pain in abdomen in the last 3 days. He had a history of pulmonary Koch's in 1 month's back pulmonologist was diagnosed, he was taking regular first line ATT medication. Anti-tubercular drugs induce gastritis is one of the most common adverse effects. The incidence rate of anti-tubercular drugs induced gastritis has found to be 36.1% in India. As a clinician & clinical pharmacist role, advised & counselling the patient, continue and complete the course of anti-tubercular drugs therapy. As a clinical pharmacist we role patients undergoing treatment for tuberculosis needs health education in detail concerning not only adherence and the benefits of ATT but also the side effects. As a health care team members pulmonologist & clinical pharmacist are needs to be made aware of these potentially fatal adverse effects associated with anti-

tubercular therapy via conduction of quality-based seminars, and health care camps published medical literature, conferences & learning programs.

KEYWORDS: Anti-tubercular therapy, adverse effects, pulmonologist, gastritis.

INTRODUCTION

The first line anti-TB drugs are potentially hepatotoxic. According to WHO, one third of the population are affected by tuberculosis (TB) and 1 in 4 adult male deaths is attributed to TB.[1,2] First line anti-tubercular drugs, isoniazid (INH), rifampin (RIF), and pyrazinamide (PZA) causes hepatotoxicity such as transaminitis and fulminant hepatic failure.[3] Anti-tuberculosis drugs have the ability to kill *Mycobacterium tuberculosis* effectively and also known to induce various adverse effects, including liver injury, skin reactions, gastrointestinal and neurological disorders. Anti-tuberculosis drug induced liver injury (ATLI) is one of the most important and serious adverse effects, which results in a low treatment success rate.[4] The first line medicines in DOTS are known to cause adverse effects like gastritis, hepatotoxicity and skin allergies. Hepatitis, gastritis is one of the most commonly seen adverse effect in tubercular suffered patient due to anti-tubercular drug therapy.[5] The incidence rate of anti-TB induced hepatotoxicity is found to be 2% to 28% based on hepatotoxicity diagnosis criteria. Anti- tubercular drugs induce gastritis is one of the most common adverse effects. The incidence rate of anti-tubercular drugs induced gastritis has found to be 36.1% in India.[1]

Rifampicin is now established as a highly effective first line drug for the treatment of tuberculosis. When rifampicin is administered in usual doses, less than 4% of patients with tuberculosis develop untoward reactions. The most common of these are rash (0.8%), fever (0.5%) and gastrointestinal disturbances (1.5%)., Other untoward reactions include thrombocytopenia and renal and hepatic abnormalities. However, gastrointestinal disturbances produced by rifampicin have occasionally necessitated discontinuation of the drug. We report an upper gastrointestinal discomfort it means gastritis. To our knowledge no such adverse effect of rifampicin has been previously recorded.[6,7,8]

CASE STUDY

- A case of 46 years old man, weighing 35 kg was brought to hospital with chief complains of generalized weakness, nausea, vomiting (multiple episodes), fever, loss of weight in the last 3 days.

- He had no past history & family history of hypertension (HTN), diabetes mellitus (DM), thyroid, pulmonary tuberculosis (PTB).
- He had not social history of alcoholic & smoking intake.
- He had a history of pulmonary Koch's in the last 1 months back diagnosed, he was taking regular first line anti-tubercular drug therapy (Isoniazid, Rifampicin, Pyrazinamide & Ethambutol).
- After 3 weeks on anti-tubercular drugs treatment, patient was found to develop hepatic & gastrointestinal dysfunction like nausea, vomiting, acidity, sour throat, indigestion of food & pain in abdomen are findings on the bases of sign & symptoms & clinical observation.
- Pulmonologist was made on provisional diagnosis of anti-tubercular drugs induced gastritis.
- Pulmonologist was hold on first line anti-tubercular drugs therapy.

RESULT AND DISCUSSION

Tuberculosis (TB) continues to remain one of the most pressing health problems, with India being the highest TB burden country. India has adopted and enforced Directly Observed Treatment Short course (DOTS) strategy to combat TB. The first line medicines in DOTS are known to cause adverse effects like gastritis, hepatotoxicity and skin allergies. Anti-tubercular drugs induce gastritis is one of the most common adverse effects. The incidence rate of anti-tubercular drugs induced gastritis has found to be 36.1% in India. In this case report at the time of presentation, general clinical physical examination PR- 95/min, BP-130/70 mmHg, oxygen saturation 96% at the room air, abdomen soft and tender, cardiac S1, S2 positive. The subjective symptoms including nausea, vomiting, acidity, sour throat, indigestion of food, abdominal discomfort, dyspepsia, indigestion and fatigue gradually become improved from 4rd day of hospitalization but continued as mild by 6^{th} day of hospitalization. Based on medical history of taking anti-tubercular drugs, a laboratory test was conducted. According to the notably levels of serum alanine aminotransferase and aspartate aminotransferase, gamma glutamyl transpeptidase, alkaline phosphatase and total bilirubin were all values are normal. Viral markers for hepatitis including hepatitis B viruses (HBsAg), hepatitis C viruses (HCV), human immunodeficiency virus (HIV) & USG whole abdomen were all are normal. Pulmonologist was made on final diagnosis of anti-tubercular drugs induced gastritis. Pulmonologist was hold on first line anti-tubercular drugs therapy. Although it was started modified anti-tubercular drugs therapy (Streptomycin, Levofloxacin, Ethambutol), antacids, along with liver supplements. Upon normalization of patient conditions, pulmonologist restarted first line anti-

tubercular drug therapy containing Rifampicin, Isoniazid, Pyrazinamide, Ethambutol pyridoxine under DOTS as per RNTCP guidelines, antacids. The pulmonologist was thus finely diagnosed with first line ATT induced gastritis. Routine monitoring of the patient & followed up till the discharge. Patient continued drugs and came for review after 15 days in OPD.

CONCLUSION

- The incidence rate of anti-tubercular drugs induced gastritis has found to be 36.1% in India.
- Anti-TB drugs induced hepatotoxicity is a serious problem and it was reported that 2-32% (India) of TB patients experience drug related hepatotoxicity, gastritis, allergic reaction (DIH) during the course of the treatment.
- As a clinical pharmacist role, we advised the patient, continue and complete the course of anti-tubercular therapy & information regarding disease, drugs, drugs related side effects under the patient counselling section.
- Patients undergoing treatment for tuberculosis needs health education in detail concerning not only adherence and the benefits of ATT but also the side effects.
- As a health care team members pulmonologist & clinical pharmacist are needs to be made aware of these potentially fatal adverse effects associated with anti-tubercular therapy via conduction of quality-based seminars, published medical literature, conferences, learning programs and health care camps.

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