



Isoniazid and Psychosis

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ABSTRACT

Isoniazid is an antibiotic used as a first line agent for the prevention and treatment of both latent and active tuberculosis. The most common side effects are elevation of liver enzymes, fever, depression and psychosis. Here is a case of 50 year old woman diagnosed positive tuberculosis test 3 weeks earlier and was started on isoniazid. Family members reported that she was muttering to self. Complaints vague fear suspiciousness, hearing voices and aggressive behavior for past 20 days after the starting of medication. There was no history of psychiatry illness in the past.

KEYWORDS : Isoniazid, psychosis.

Came report :

50 years old female, a home maid by occupation was admitted in chest & TB ward with history of right sided chest pain for past 1 month with productive cough, hemoptysis and breathlessness 1 week duration. Investigations revealed normal haemogram, ESN-80 mm for first hour, random blood 100mg /dl , blood urea 27mg/dl, creatinine 1.1 mg/dl LFT values are within normal limit. Chest x-ray revealed right sided hydropneumothorax. CECT confirmed the diagnosis sputum smear was positive for AFB. She was started on isoniazid. Family members noticed her to be muttering to self, sleep disturbance, inappropriate smile, complaints vague fear and suspiciousness. When family members confronted her behavior, she became agitated. The symptoms started after 2 days of the initiation of the therapy. She was altered to psychiatry illness. On mental status examination, she was conscious, disoriented to time, oriented to place and person. She was irritable and said she could hear voices inaudible to others that she has to obey the orders of the voices.

She believed that people are plotting against her. Ger MMSE score was 18. She was notably distractible but not disorganized. She was neither suicidal or homicidal. Because of the possible relationship between isoniazid and psychotic symptoms, the patient and isoniazid was discontinued. She was treated with low dosage Risperidone 2mg /day in divided doses. Within 2 days her hallucinations and delusions had resolved, and her cognitive status had returned to normal, with a follow up MMSE score of 30. Upon her recovery Risperidone was weaned and discontinued after 3 weeks and without recurrence of psychotic symptoms.

Discussion :

INH is one of the primary drugs of the ATT regimen because of its low cost and high safety and potency.

However it is known to have side effect such as peripheral neuropathy, hepatitis, psychosis etc. The drug is known to interfere with various metabolic pathways essential for neuronal functioning. INH causes B6 vitamin deficiency by increasing its excretion. INH also inhibits brain pyridoxal – 5 phosphatase activity which leads to decreased brain level of GABA and other synaptic neurotransmitters. Susceptibility is increased by advanced age, alcohol intake, diabetes, family history, malnutrition, hepatic insufficiency etc.

INH related psychiatry disorders reported in the literature include psychosis, obsessive compulsive neurosis and mania loss of memory and death following ingestion of INH has also been reported.

It is important to be aware that isoniazid can induce psychosis hence pulmonologists and Psychiatrists should consider this relationship and should consider alternative antitubercular drugs when patients experience psychosis with INH.

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