

DOI: 10.5152/TurkThoracJ.2019.247

[Abstract:0511] OP-116 [Accepted: Oral Presentation] [Pediatric Lung Diseases]

Drug Side Effects in the Follow-up of Patients Receiving Prophylactic Treatment for Latent Tuberculosis

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Objectives: After encountering tuberculosis (Tbc) and positive tuberculosis test, prophylaxis is started for 6 months after exclusion of tuberculosis. Prophylaxis is made according to INH (Isoniazid) 300mg/kg, or if the person with tuberculosis has a known drug resistance status. Antituberculosis drugs have many side effects. Polyneuropathy, elevation of ALT and AST are the most common side effects of INH.

Methods: In this study, we aimed to retrospectively examine the side effects of the drug in the follow-up of our patients who received prophylactic treatment for tuberculosis and latent tuberculosis. Uric acid, AST and ALT levels of children were evaluated.

Results: A total of 141 patients (66 men, 75 women) were reviewed retrospectively. The mean age of the patients included in the study was 10.65 years (min 10 months, max 20 years). At least one of the family members of 70 patients had a history of tuberculosis. The others were children who were diagnosed with PPD when they were investigated for chronic cough. PPD test mean value was 14.2 mm (min 0 mm, max 28 mm). According to the antibiograms obtained from microbiological investigations of family member with Tbc, prophylaxis is decided to be continued with which drug. Hyperuricemia (min 5.6 mg/dL, max 14 mg/dL) developed during prophylaxis in 16 patients without any known renal disease and without usage of loop diuretics before any prophylaxis was initiated. For the uric acid measurement kit used in our hospital, values above 5.5 mg/dL were considered high. Of the 16 patients with hyperuricemia, 8 had uric acid levels above 7 mg/dL, and allopurinol treatment, hydration was started. Blood tests of these patients were repeated once a week. When uric acid measurements were below 5.5 mg/dL, allopurinol treatment was discontinued. 1 of the patients with uric acid measurement above 7 mg/dL had Etambutol+Prazinamide, 1 had INH+Prazinamide and 6 had INH alone. The mean time to develop hyperuricemia was 4 months (min 0.67 months, max 6 months) after prophylaxis. There was ALT elevation in 7 (4 boys, 3 girls) and AST elevation in 14 (5 boys, 9 girls). Two of the patients who developed elevated AST and ALT had simultaneous hyperuricemia. According to the AST (SGOT) and ALT (SGPT) measurement kit used in our hospital, values above 40 U/L for male gender and 32 U/L for female gender were considered high.

Conclusion: There is information about hyperuricemia seen with pyrazinamide or ethambutol in the literature. When we evaluated the patients who were followed in our center, the relationship between INH usage and hyperuricemia was remarkable. We believe that our study will contribute to the literature in terms of showing that monitoring of liver enzymes and uric acid values is important during prophylaxis.

Keywords: Encountering tuberculosis, latent tuberculosis, side effects of antituberculosis drug