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A Case of Pyrazinamide Induced Fulminant Hepatic Failure

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Standard antituberculous therapy, including isoniazid (INH), rifampin, ethambutol, and pyrazinamide (PZA), is widely used to treat active tuberculosis. The most important side effect is hepatotoxicity. In a standard four-drug regimen, PZA was the most common cause of drug-induced hepatitis and was dose-related. The incidence of drug-induced hepatitis is high at doses of 40~70 mg/kg per day but has fallen significantly since the recommended dose was reduced. Liver toxicity induced by PZA is rare at doses of 25 mg/kg per day or less. PZA-induced fulminant hepatic failure is also rare but fatal. We report a case of fulminant hepatic failure caused by a re-challenge of PZA. (Tuberc Respir Dis 2007;63:435-439)

Key Words: Drug induced hepatitis, Fulminant hepatic failure, Pyrazinamide

서 론
 Pyrazinamide (PZA) 1952
 가 . PZA
 가 가
 Isoniazid (INH), Rifampin (RFP), PZA,
 Ethambutol (EMB) 4 가
¹⁻⁴
 가
^{3,4}
 5~10% HREZ PZA 28
 0.02% ^{5,6} Yee 10 ,
 PZA 2% INH 37 5 12,300/
⁵ 4 mm³, aspartate aminotransferase (AST) 536 IU/L, L-ala-
 가anine aminotransferase (ALT) 388 IU/L, Total Bilirubin
 (TB) 0.8 mg/dl 1 AST
 650 IU/L, ALT 1,025 IU/L, TB 1.7 mg/dl
 1
 과거력:
 진찰 소견: 120/80 mmHg, 102 / ,
 24 / , 38°C

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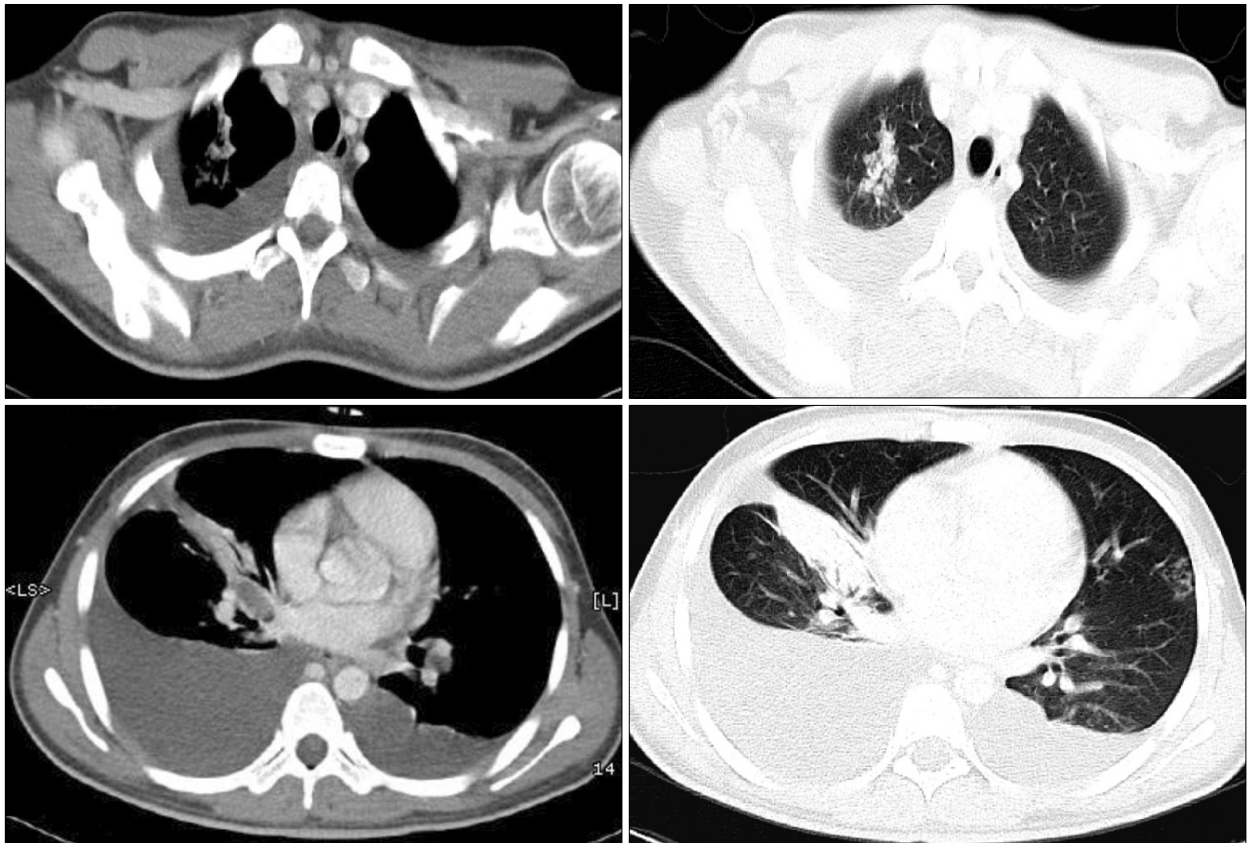


Figure 2. The Contrast enhanced CT scans of the chest showed low attenuation lesion in a bronchus lumen of right middle lobe and atelectasis. Both pleural effusion was noted. There was linear branching nodular opacity and ground glass opacity in both lung fields. No definite lymphadenopathy in mediastinum was noted.

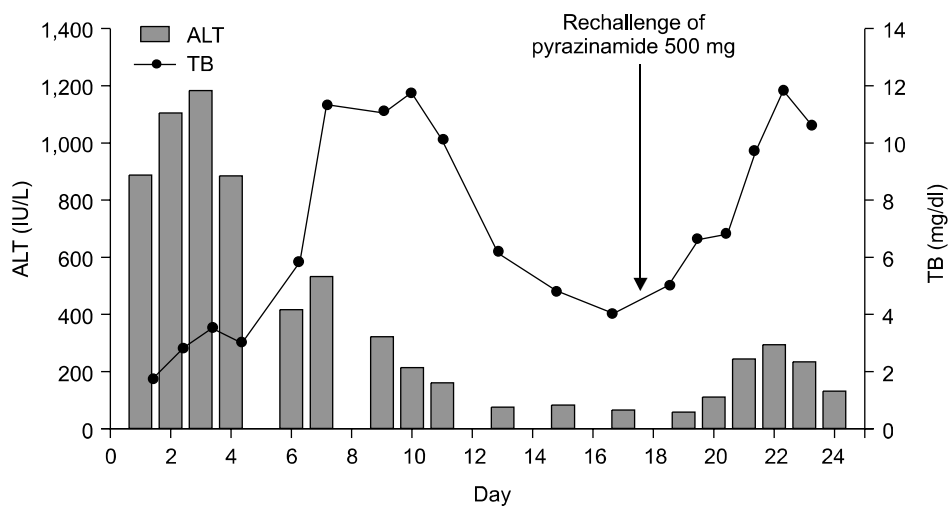


Figure 3. The clinical course of patient since admission. All antitubercular drugs were withdrawn initially. AST decreased on the 4th day, and total bilirubin also decreased a week after. Pyrazinamide 500 mg was administered on Day 18, the patient developed nausea, vomiting, and high fever the next day. Hepatic encephalopathy was manifested three days later. The patient expired two days later.

10 가 가 . bilirubin
 5~10% aminotransferase (AT) 2 RFP 1
 0.02% 5,6 Yee bilirubin
 5 AT 2 가 1
 INH 2%, RFP 3 가 INH . bilirubin
 0%, PZA 2% bin AT가 가
 PZA 가
 가 (5), ,
 (,),
 10,11
 17 가 TB가 11 mg/dl 가 7-9
 ALT 1,000 IU/L 가 INH, RFP, PZA
 가 B , C
 4 50 mg/ 가 INH
 mg/ . RFP 2, 3 300
 300, 450 (<50 kg), 600 mg/ (>50 kg)
 7 AT가 PZA 250 mg/
 1 g, 1.5 g/ 7,8
 INH, RFP, PZA
 2 AT가 7,8 RFP
 PZA 500 mg 2 가 가 가 RFP
 (BTS), (ATS), INH 가 9 AST 가가
 (CDC) 가 PZA 가 가 AST 가
 RFP INH 가 PZA가 가
 . PZA
 가 AST 가 5 가
 가 AST가 3 7-9,13 Durand 14 8
 INH, PZA
 ALP 가 가 가 4 INH
 가 . A, B, C 가 80% PZA
 PZA
 7-9 Thompson 13
 . RFP bilirubin INH, RFP, PZA
 ubin

PZA
 가 가 5,7,13,14, INH
 RFP
 acetaminophen
 14,15
 요 약
 PZA 2%
 가 PZA
 PZA

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