Drug-Resistance Mycobacterium Tuberculosis Gene Chip for Tuberculous Pleuritis: Detection of Thoracoscopic Biopsy

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Case Report: NO

Objective: To study the drug-resistance gene mutations in patients with mycobacterium tuberculous pleuritis and their influence on the therapeutic effect. Method: Fiberbronchoscopy used as thoracoscopy in 46 cases with mycobacterium tuberculous pleuritis, pleural biopsy specimen detected by mycobacterium tuberculous gene chip. All cases treated with chest tube drainage and antituberculous therapy. Result: 32 cases with wild-type gene were found, while 10 cases with drug-resistance gene mutations were found, including 5 cases with mutations of rpoB gene against RFP, 6 cases with mutations of katG gene against INH, 2 cases with mutations of inhA gene against INH, 1 case with mutations of embB gene against EMB, 1 case with mutations of rpsL gene against SM, 6 cases with multidrug resistance gene. Compared to patients with drug-resistance gene mutations, patients without drug-resistance gene mutations expressed better curative effect with shorter duration regarding length of stay (12.1±3.1d vs. 8.2±2.5d, p <0.01), chest tube drainage time (7.0±2.6d vs. 4.0±1.8d, p < 0.01), defervescence time (6.8±1.6d vs. 4.2±1.4d, p < 0.01). Conclusion: There were drug-resistance gene mutations in patients with mycobacterium tuberculous pleuritis and they influenced the therapeutic effect significantly. Mycobacterium tuberculous gene chip technology was useful for the early detection of drug-resistance tuberculous pleuritis and may be useful for the Anti TB drug selection.