TUBERCULOSIS AND DRUG RESISTANCE DURING ONE-YEAR PERIOD AMONG PATIENTS IN SOUTHWESTERN GREECE

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The aim of the present study was to assess the frequency of tuberculosis and drug resistance of *Mycobacterium tuberculosis* (MTB) among patients attending the University Hospital of Patras (UHP) during 2006, applying conventional and molecular methods.

A total of 1305 clinical specimens [313 sputa, 520 bronchoalveolar lavages (BAL), 259 sputa expectorated after bronchoscopy (SAB), 20 gastric aspirates, 50 urine, 139 pleural, synovial, pericardial, peritoneal and cerebrospinal fluids and 4 blood cultures] recovered from 1060 patients were received for MTB isolation. Sediments of decontaminated specimens except those from otherwise sterile sites were used for direct microscopy by the Ziehl-Neelsen (ZN) acid-fast technique and cultures were performed by inoculation directly on Löwenstein-Jensen slants (bioMerieux) and in BACTEC culture vials (Becton Dickinson). Nucleic acid detection in 896 clinical specimens was performed by the Cobas Amplicor (CA) PCR for MTB (Roche Diagnostics). Identification of MTB was performed by biochemical tests, verified by the Genotype MTBDR (Hain). Antimycobacterial drug susceptibility (AST) against isoniazid (INH), rifampin (RIF), ethambutol (EMB) and streptomycin (STR) was tested by the Mycobacteria Growth Indicator Tube (MGIT, BBL, Becton Dickinson) and hybridization, by the use of Genotype MTBDR.

From 16 samples (6 sputa, 5 BAL, 2 SAB, 2 gastric, 1 pleural) of 13 patients *Mycobacterium* spp were isolated. Twelve patients had MTB infection; from one patient *Mycobacterium* other than tuberculosis was identified. Four of these patients had positive ZN and 11 of them had clinical specimens' positive by CA PCR, while in the remaining two no PCR was performed. Fourteen additional specimens were PCR-positive but culture-negative for MTB. These results were viewed according to the clinical and laboratory findings of the patients. Among the 12 MTB isolates, one was resistant to INH, one to EMB, two to STR and one to STR and EMB; no multi-drug resistance (INH and RIF) was identified.

CA PCR directly from clinical specimens combined with other laboratory and clinical signs of the patients, contribute to the early diagnosis of tuberculosis. We have detected a low incidence of MTB infection in our region, with no multi-drug resistant isolates.