EVALUATION OF COMMERCIALLY AVAILABLE KITS VERSUS CLASSICAL METHODS FOR THE DIRECT DETECTION OF MYCOBACTERIA IN CLINICAL SPECIMENS

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Purpose: The detection of mycobacteria directly in clinical specimens bypassing the time problems and supporting the prompt treatment of the disease.

Method: We examined 5508 samples. All received specimens were examined directly with Ziehl Nielsen (ZN) and cultured in Bactec MGIT 960 and Lowenstein Jensen (LJ). In specimens of high clinical suspicion for TB or ZN (+), we performed A- MTD (GenProbe BioMerieux) and GenoType Mycobacteria Direct Ver.3 (Hain Lifescience), while in positive cultures, PCR and reverse hybridisation test were added.

Results: 80 patients were tested positive for TB(60 *M. tb* and 20 nontuberculous).

Smear (+) were 36/80, culture-LJ (+) found 67/80 (58 *M. tb* and 9 nontuberculous), since culture-MGIT were positive in all tested samples (60 *M. tb* and 20 nontuberculous).

63 *M. tb* strains were directly detected by MTD (3 were false positive), 57 strains by Direct (3 false negative). The Direct test additionally detected 9 nontuberculous(NTM) strains. The remaining nontuberculous strains that failed to be detected were identified by CM and AS GenoType Mycobacteria Hain Lifescience.

Conclusions:

1. There is no ideal method for direct detection of mycobacteria in clinical specimens.

2. Direct detects *M.tb* complex, plus 4 species of NTM (*M. avium*, *M. kansasii, M. intracellulare, M. malmoense*), since A-MTD stays only with *M. tb* complex.

3. In any case classical methods must not substituted by molecular methodologies, but only as assisting procedures to improve the overall effectiveness.