2103. Detection of KatG/inhA Mutation to Guide Isoniazid and Ethionamide Use for Drug-resistant Tuberculosis
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Background. Both Mozambique and Brazil are countries with a high burden of tuberculosis. Isoniazid (INH) is one of the cornerstonest of tuberculosis treatment and, depending on the mutated gene (katG or inhA), the organism may be susceptible to high doses of INH (inhA mutation) or to ethambutol (KatG mutation).
Methods. To analyze isoniazid genotypic resistance profile in Mycobacterium tuberculosis to guide decision making about management of resistant tuberculosis. Descriptive study of MTB tuberculosis isolates from Ribeirão Preto, Brazil (2011-2014) and 155 isolates from Beira, Mozambique (2014-2015). Drug resistance patterns and the specific genes mutations were determined using Genotyp MTBDRplus (Hain Lifescience GmbH, Germany).
Results. In katG gene were detected in 13/22 (59%) of Brazilian and in 32/38 (84.2%) of Mozambican isolates. Unique inhA mutations were observed in 8/22 (36%) isolates in Brazil and 4/38 (10.5%) in Mozambique. Both katG and inhA mutations were detected in 1/22 (5%) and 2/38(5.2%), respectively. katG mutations were more frequent among INH previously treated patients.
Conclusion. There is a geographical variation of INH mutations and the new molecular tests can be used to guide and accelerate decision making towards the use of ETH or high doses of INH based on detected mutations.
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