PATTERNS OF SUSCEPTIBILITY TESTING OF ANTITUBERCULOSIS DRUGS AMONG PATIENTS ATTENDING TUBERCLOSIS CLINIC IN KAKAMEGA TEACHING AND REFERALL HOPITAL KENYA

Abstract.

Drug Resistance Tuberculosis (DR TB) is a form of tuberculosis infection that is resistance to treatment with Rifampicin and Isoniazid with or without resistance to one or more other drugs used in the first line treatment of tuberculosis (Mitchison, 2012). Kenya is ranked 13th among the 22 high TB burden countries worldwide (WHO, 2013). MDR TB is a global health security risk and carries grave consequences for those affected (WHO, 2014). Its development is associated with high mortality rates and low levels of productivity among workers due to the high cost of care which imposes a heavy economic burden on the nation (Eduardo, 2011). DR TB therefore poses a major challenge to tuberculosis care and control (Ellen & McNerney, 2008). Limited literature talks about the exact prevalence of resistance to anti-tuberculosis drugs in populations with high rates of tuberculosis (WHO, 2015). In addition, only a few isolated cases of multiple drug resistant tuberculosis have been reported in Kenya (Ogaro*et.al.,* 2012). This study aimed at determining the burden of pattern of Drug Restance TB via determination of the prevalence of TB and the gene resistance patterns to the two most commonly used anti- TB drugs Rifampicin and Isoniazid. A cross-sectional study was conducted among new and re-treatment cases of tuberculosis referral patients in Kakamega county teaching and referral hospital between June and August 2018. A total of 138 patients were enrolled for the study and the health facility TB register questionnaire was used to obtain data on demographic factors of the patients. Data generated was analyzed using the statistical package for social sciences (SPSS) version 22.0 to find case summaries. Descriptive statistical tests were performed on the data including means, modes, percentages, standard deviations and percentiles. Data was then presented in pie-charts, bar graphs and tables. Out of the 138 cases seventy (50.7%) were male and sixty-eight (49.3%) female. All the study cases were new. Twenty-eight (20.3%) of the isolates became positive for MTB. Of these, eight (5.7%) isolates showed resistance to either of the two first line drugs tested while twenty (14.5%) were fully susceptible. None of the isolates tested became positive for Drug resistant tuberculosis. Notably most of the resistant cases were found to be among HIV positive patients (4.3%) with (1.4%) of the cases being from HIV negative patients. This study revealed high levels of drug resistance among new cases of untreated patients. This implies ongoing transmission of drug resistant strains in the community.

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