PA-052 MULTIDRUG-RESISTANT TUBERCULOSIS (MDR-TB): AN EMERGING PROBLEM IN WEST AFRICA

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Background Multidrug-resistant tuberculosis (MDR-TB) remains a clear threat to TB control. There is a paucity of data

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on DR-TB for many countries especially in sub-Saharan Africa. The study was undertaken to measure the prevalence of DR-TB, including MDR-TB, from West Africa.

Methods Mycobacterial isolates were obtained from consecutive new and previously treated TB patients from Burkina Faso, Ghana, Guinea-Bissau, Mali, Nigeria, Senegal, The Gambia and Togo from December 2012 to December 2014. Phenotypic drug susceptibility testing to first- and second-line anti-TB drugs was performed using BACTEC MGIT 960 system.

Results Viable isolates from a total of 44% (416/950) new and 56% (534/950) previously treated TB patients were included. HIV results were available for 599 (63%) with estimated HIV-TB co-infection of 21% (95% CI: 18.2–24.9%). Pooled estimate of any DR-TB prevalence among new TB patients was 20% (95% CI: 16.4–24.4%) while for MDR-TB this was 6% (95% CI: 4.1–9.0%). Among previously treated TB patients, these were 53% (95% CI: 48.3–56.9%) and 34% (95% CI: 30.1–38.3%), respectively. Significant factor for the development of MDR-TB was the history of previous anti-TB treatment (Crude OR=0.13; 95% CI: 0.08–0.20; p=<0.001).

Mono-resistance was detected in 12% (95% CI: 10.2 –14.5%) with the highest resistance to streptomycin 6% (95% CI: 4.8–7.9%). Pooled estimate of pre-XDR-TB prevalence rate among MDR-TB patients was 21% (95% CI: 15.2–26.9%). Estimated resistance to ofloxacin, kanamycin, capreomycin and kanamycin and capreomycin were 7% (95% CI: 3.5–10.9%), 2% (95% CI: 0.6–5.1%), 9% (95% CI: 5.8–14.5%), and 3% (95% CI: 0.8–5.8%), respectively.

Conclusions The reported prevalence of MDR-TB and pre-XDR-TB are high compared to WHO estimates. Resistance to streptomycin may indicate a high risk of failure for the WHO standard regimen. MDR-TB patients with resistance to either the fluoroquinolone or injectables may have suboptimal response; thus the need for continuous surveillance of TB resistance.

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