Editorial

GeneXpert MTB/RIF – A new innovation in the diagnosis of Tuberculosis

Tuberculosis has been present in humans since ancient times. Among the top 10 causes of death worldwide, the name of Tuberculosis ranks high and has been mentioned in the Global Tuberculosis (TB) report 2017 of World health Organization.[1] Further, it has been found out that in 2016, 10.4 million people fell ill with TB, and 1.7 million died from the disease (including 0.4 million among people with HIV). Over 95% of TB deaths occur in low- and middle-income countries. In 2016, an estimated 1 million children became ill with TB and 250 000 children died of TB (including children with HIV associated TB). Multidrug-resistant TB (MDR-TB) remains a public health crisis and a health security threat. WHO estimates that there were 600 000 new cases with resistance to Rifampicin – the most effective first-line drug, of which 490 000 had MDR-TB.

The definitive diagnosis of Tuberculosis is at times both challenging and elusive resulting in delay of treatment causing immense suffering to the patient as a physical and financial burden. Recently a new innovative test, The GeneXpert has emerged as a major breakthrough. It is a cartridge-based nucleic acid amplification (NAAT) automated diagnostic test that can identify Mycobacterium tuberculosis (MTB) DNA and resistance to Rifampicin (RIF) simultaneously within hours. This new test represents a major milestone for global TB diagnosis and care. WHO has endorsed new rapid tuberculosis test.[2]

The Bangladesh Health Ministry launched the Zero TB Cities Initiative in Dhaka on 28 October 2017 and representatives from the Stop TB Partnership, Harvard Center for Global Health Delivery-Dubai, International Union Against TB and Lung Disease and participating partners. A declaration was signed with a call for action "uniting to make our cities TB free."

Dhaka National Medical College Hospital has been selected as a centre for GeneExpert test as an addition to the running DOTS program. All the logistic support such as the Automated analyzer, working reagents etc been provided free of cost and patients shall not be charged any fees. In a short period of One and half months, this centre has detected 11 cases of MTB out of a total of 65 patients with one case showing resistance to Rifampicin. In this crowded part of old Dhaka, this initiative will combine a public awareness campaign with TB screening, in order to help find many more of the "missing" TB cases and therefore will go a lot further as "Ending the TB epidemic by 2030 is among the health targets of the Sustainable Development Goals".

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References:

1. Tuberculosis (TB). World Health Organization. 16 February 2018.

2. Two hour detection of MTB and resistance to rifampicin", Cepheid International, 2011 www.cepheidinternational.com