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Editorial

MULTI-DRUG RESISTANT TUBERCULOSIS (MDR-TB)

MDR-TB is a social problem, because the most serious danger of MDR-TB is that it is much more difficult to treat even where second line drugs are available. Treatment of MDR tuberculosis can take at least two years & the results are poor. Second line drugs cost is 30 times more. Patients with MDR-TB may need to be hospitalized & isolated which adds to the cost of treatment to prevent.

Multidrug Resistant Tuberculosis (MDR-TB)

Multidrug resistant tuberculosis is defined as tuberculosis resistant to at least isoniazid & rifampicine, the two most potent anti-TB drugs. (1)

MDR-TB : Bangladesh perspective.

There is no national data on drug resistance in Bangladesh. In collaboration with CDC, ICDDR.B, Bangladesh conducted drug-susceptibility testing sample of 657 patient showing 3% & 15% MDR-TB among new & previously treated TB patients respectively.(2)

Damien Foundation has also conducted two drug-resistance studies in 1995 & 2001 comprising 645 & 1041 patients. the 1995 stusy showed 0.7 % and 6.8% MDR-TB among new and previously treated TB patients.(3)

A study conducted in 2005- 2006 showed that Category II failures 88% had MDR-TB.(4)

Causes of multidrug-resistant TB

Although its causes are microbial, clinical & programmatic, MDR-TB is essentially a man-made phenomenon.

from a microbiological perspective, resistance is caused by a genetic mutation that makes a drug ineffective. An inadequate or poorly administrated treatment regimen allows drug-resistant mutants to become the dominant strain in patient infected with tuberculosis.

Factors of inadequate anti-TB treatment are noncompliance with national guidelines, poor training, no monitoring of treatment of health-care providers & also poor quality of anti-TB drugs, unavailability of drugs or poor storage conditions or may be wrong dose or combination.

Types of drug resistance

1. **Mono-resistance**
   Resistance to one type of drug e.g isoniazid.
2. **Poly-resistance**
   Resistance to more than one type of drug e.g streptomycin, isoniazid & ethambutol.
3. **MDR-TB**
4. **Extremly drug-resistance tuberculosis (XDR-TB)**
   This is subcategory of MDR-TB. XDR-TB is defined as MDR-TB plus resistance to quinolone & an injectable second line drug(kanamycin, capreomycine).

So MDT-TB is an emerging health problem all over the world, specially in developing countries and all the concerned authority engaged in National Tuberculosis & Leprosy Control Program should give emphasis to this emerging public health problem.

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Reference

1. DGHS & WHO, 4th edition
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