

## **Multi Drug Resistance Tuberculosis**

Tuberculosis (TB) has been neglected as public health issue for many years and remains the major cause of death from a single infectious agent among adults in developing countries. TB morbidity and mortality continues to rise because of deterioration of public health system. In 1994 WHO declared TB to be a global emergency.

Multi-drug resistant tuberculosis, i-e resistance to Rifampicin and Isoniazid (MDR TB) has been the most common sequel of the upsurge of tuberculosis in many countries. The global burden of MDR TB is difficult to estimate.

Drug resistance complicates efforts to control tuberculosis, while increasing resistance to Rifampicin is a serious threat. Patients infected with organisms resistant to Rifampicin have high rate of treatment failure when given the short course therapy.

The establishment of DOTS programme has shown to reduce the development of MDR TB in addition to cutting TB mortality by 70%. However, there is a concern that if DOTS Program is implemented without having information about past history of treatment and drug resistance, it may increase the overall problem of drug resistance in developing countries. There has been no thorough study carried out to establish the extent of drug resistance problem in Pakistan. PMRC TB Research centre has carried out many studies so far in this field and published following studies regarding the issue of MDR. In earlier studies Siddiqi et al in 1976 and in 1981 published a thorough study on drug susceptibility of patient's isolates in the Lahore area of Pakistan. Later, Aziz et al (1986) published a follow-up study to evaluate the change in the drug resistance in the same area. Presently Rizwan et al in 2008, 2005 2003 and 2001 has published the latest data on MDR TB in the same area.

Several important issues to be addressed in the patient management and overall national planning of TB control program. First the level of drug resistance in Pakistan is extremely high and is comparable with world's worst examples like Estonia and some other countries. Secondly the drug resistance has increased significantly in the last two decades and needs to be controlled. A larger study at national level is very much needed in order to establish overall prevalence of drug resistance in the country. Due to such a high drug resistance, even in those patients who have no history of treatment, we need to reconsider DOTS strategy and plan how to establish more accurate history of treatment and how to select a patient for DOTS program. Having so many chronic patients with significant drug resistance, we need to have drug susceptibility testing facilities in the country so that these patients could be managed properly and may be placed on DOTS Plus program based on their drug susceptibility profile. Failing to do so, we may increase the drug resistance problem further. Lastly we need to better equip and modernize laboratory facilities, bring better test technologies and standardize the susceptibility test procedures through out main diagnostic laboratories in country.

According to studies mentioned above MDR TB which was 11.3% in 1996 has risen to 14.6 % in 2007 which is quite alarming. Same is the case with other drugs. Therefore prompt and efficient measures mentioned above are required to control this problem.

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