Pakistan's battle with multi-drug resistant tuberculosis — establishing the ground rules

Madam, the emergence of multi-drug resistant (MDR) strains of tuberculosis poses an important challenge for the healthcare sector in Pakistan. MDR tuberculosis strains are resistant to a number of first line antituberculous drugs including "atleast isoniazid and rifampicin."[1] Pakistan is amongst the top ten countries in the world with regards to the disease burden of tuberculosis and the high incidence and prevalence of the disease in the country, has been attributed to several factors such as poverty, low awareness, patient non-compliance and suboptimal healthcare infrastructure.[2,3]

The rates of MDR tuberculosis in Pakistan vary from 2.3% in untreated individuals to an alarming 17.9% in individuals who have been previously treated for the disease.[1] In recent years, several studies have documented the overall trends of multi-drug resistant tuberculosis in Pakistan. A study has shown an almost consistent increase in the number of MDR cases of tuberculosis from 1990 - 2007 with more than 15,000 isolates reported during that period.[4] In the wake of the Afghan war, a large number of Afghan refugees took up ad hoc residence in Pakistan. According to estimates, the annual rates of tuberculosis infection in this population approximate 1.7%.[5] Their unfettered movement across the relatively porous Pakistan-Afghanistan border represents potential interruption in the course of tuberculosis treatment; this in turn provides fertile ground whereby MDR strains of tuberculosis can substantially thrive.[5]

Individuals with a previous history of incomplete treatment are at a higher risk for the development of MDR tuberculosis.[1] This, in turn, highlights the importance of completion of treatment in patients with primary tuberculosis. Interventions targeting this particular goal also need greater integration within the mainstream strategies for the primary and secondary prevention of communicable diseases in the country. It is important to acknowledge the unique challenges in effective tuberculosis control that are presented by the presence of infected Afghan refugees in Pakistan. Such populations especially, require greater access to diagnostic facilities for better case detection and follow-up[3] and their treatment also needs to be monitored more actively.

In the future, we need to be vigilant with regards to the dissemination of the extensively drug resistant (XDR) strains of tuberculosis in Pakistan. Such strains include the MDR tuberculosis strains which are "additionally resistant to any flouroquinolone and a second line injectable agent". A large study done in Pakistan over 17.5 years has reported 22 cases of XDR tuberculosis, the first case being reported in 1998. Therefore, the problem exists in Pakistan, although in a limited proportion at the moment.[4] MDR and XDR tuberculosis can be tackled only through proper planning and execution of tuberculosis control programmes in Pakistan. A "broad-tiered" liaison between the public and private sectors can be instrumental in the eradication and prevention of MDR and XDR tuberculosis.[3]

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