Successful Management of Highly Drug-Resistant Tuberculosis with Individualized Drug Susceptibility Testing

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Sir,

I read with interest the original article “Successful management of highly drug-resistant tuberculosis with individualized drug-susceptibility testing” by Soman et al in July 2014 issue of JAPI. I have following comments to make.

Multi-drug resistant tuberculosis (MDR-TB) cases are on the rise 1 and our tertiary care hospitals are reporting up to 20-25% of TB isolates as MDR (personal communication). The article puts forth real-life scenario that a physician faces while managing such complex cases. Large number of regimens used to treat the patients in this case-series reflects the differences in drug-susceptibility of MDR-TB strains as well as patient tolerance to various drugs. Single regime (like in DOTS PLUS program) is less likely to work in this heterogeneous population. Rapid molecular tests like Gene Xpert MTB/RIF or Line probe assay can provide quick results and usually correlate well with the traditional drug-susceptibility tests 2 and should be used wherever available.

Injectable aminoglycosides given for several months (minimum 6 months or sometimes even longer) appear to be the key to successful treatment. Short duration courses run the risk of TB relapse. Injection site pain and fibrosis, hearing loss, tinnitus, and renal function abnormalities are common adverse effects which limit patient compliance. Use of fluoroquinolones (FQ), wherever possible, increase the chances of therapeutic success. However, rates of FQ resistance found in this study are >40%, way beyond PETTS study which reported around 13% resistance to FQ, 3 indicating serious situation that we face in India. PAS, cycloserine, ethionamide, linezolid, high-dose isoniazid and clofazimine are useful agents but have their own range of side effects on long-term use. Newer and safer anti-MDRTB drugs are therefore urgently required.

In extrapulmonary TB cases, judging the response to anti-MDRTB treatment is difficult as follow-up cultures are not easily possible. Good outcome was reported in 49/52 patients in this study, which is encouraging. Competent microbiology support, careful selection of drugs based on individualized drug susceptibility test and drug-exposure history and good patient compliance seem to be critical for success.

The cost of treating a patient with MDR-TB infection can be prohibitive 4 and availability of second-line agents across medical stores is always a problem. If clinicians, counselors and social workers, pharmacists and even pharmaceutical companies come together to establish TB-care centers with facilities such as patient consultation, counseling, laboratory services, social support services and uninterrupted second-line drug supply; high cure rates can be expected.

References