Living and dying with drug resistant tuberculosis - Are we doing enough?

Dear Editor,

In a shrinking world where diseases know no boundaries, severe global epidemics of drug resistant tuberculosis (DR-TB) pose a great health crises. Globally, World Health Organization (WHO) estimates that there are 484,000 new cases with resistance to first line drug rifampicin, of which 78% have MDR-TB (Multi drug resistant TB).[1] India shares the highest global burden (27%),[1] with MDR-TB rates as high as 14% in previously treated and 2.8% in new cases with rampant increase of Extensively drug-resistant tuberculosis (XDR-TB).[1]

A 22-year-old female patient resident of Chamoli district, Uttarakhand presented with altered sensorium for 2 days, shortness of breath, constipation, pain abdomen and vomiting for 5-6 days to emergency department of a tertiary care centre.

She was a known case of pulmonary tuberculosis on anti-tubercular category 1 treatment, diagnosed on the basis of clinical and radiological findings in a private centre, where she had presented with a history of non-productive cough and haemoptysis of 3 months duration. She had presented earlier to our centre with history of dyspnoea for 2 months for evaluation and was found to have mild to moderate pleural and pericardial effusion. She was managed then by pericardiocentesis (fluid showing lymphocyte preponderance). Further workup could not be done due to patient denial. She had three of her sisters who have suffered with pulmonary Tuberculosis previously (all three on category 1 treatment and deceased).

On the current admission, with a poor Glasgow Coma Scale (GCS) of 7, preliminary work up showed a largely normal blood picture, with sterile blood culture sensitivity. However her cerebrospinal fluid (CSF) study showed lymphocytic preponderance and chest X ray showed military pattern of the disease with cardiac shadow enlargement.

Her Cepheid Xpert MTB/RIF assay (Sunnyvale, CA, U.S.A.) suggested a rifampicin resistant strain of Mycobacterium tuberculosis complex, owing to which additional second line medications like Levofloxacin, Linezolid, Clofazamine were added to her existing regime.

During the course of her stay, she deteriorated neurologically secondary to the tubercular hydrocephalus, which needed an extra ventricular drain. Her GCS deteriorated eventually to $E_1V_1M_1$ within 8 days of her intensive care unit stay. Owing to the guarded prognosis, patients' attendants chose to leave against medical advice.

This case emphasises the need of an early laboratory diagnosis of MDR-TB and not merely relying on clinical or radiological diagnosis. We reinforce the utmost importance on early suspicion, laboratory confirmation and universal Drug-Susceptibility Testing (DST) of tuberculosis to alleviate high numbers of complications in hot zone area like India.

India has announced the target of ending TB by 2025, 5 years ahead of the global End TB strategy.[2] The New End TB strategy highlights the critical role of laboratories.[3] All confirmed TB patients should receive DST at least for rifampicin (RIF); and all patients with rifampicin-resistant (RR)-TB should receive DST at least for fluoroquinolones (FQs) and second-line injectable drugs (SLIDs).[4]

So let each one of us contribute to eliminating this preventable, treatable, and curable disease.

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Conflicts of interest

There are no conflicts of interest.

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References

1. Global tuberculosis report 2019. Geneva: World Health Organization; 2019. Available from: https://apps.who.int/iris/bitstream/handle/10665/329368/9789241565714-eng.pdf?ua=1. [Last accessed on 27th July, 2019].
2. Sachdeva KS, Mase SR. The end TB strategy for India. The Indian Journal of Tuberculosis. 2019 Jan;66(1):165-6.
3. Uplekar M, Weil D, Lonnroth K, Jaramillo E, Lienhardt C, Dias HM, et al.WHO's new end TB strategy. Lancet. 2015;385(9979):1799–801.
4. Framework of indicators and targets for laboratory strengthening under the End TB Strategy. Geneva: World Health Organization; 2016. Available from: https://apps.who.int/iris/bitstream/handle/10665/250307/9789241511438-eng.pdf?sequence=1. [Last accessed on 27th July, 2019].

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