

Case Report

Therapeutic Second Trimester Abortion in a Critically Ill Patient with Disseminated Multidrug Resistant Tuberculosis (MDR-TB): An Option Revisited

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Abstract

Multidrug Resistance Tuberculosis (MDR-TB) during pregnancy poses management challenges and successful outcome of these patients require appropriate, well timed individualized treatment. We hereby report a case of 25-year female having disseminated Multidrug Resistance Tuberculosis (MDR-TB) whose worsening condition necessitated termination of pregnancy at 14 weeks of gestation. We felt that well timed decision of pregnancy termination resulted in successful management of index patient and sharing this experience through this article may help others for treating such patients.

Keywords: Antitubercular Drugs; Management; Multidrug Resistance Tuberculosis

Introduction

Multidrug resistance tuberculosis (MDR-TB), an emerging global health crisis, is caused by mycobacterium tuberculosis that is resistant to isoniazid and rifampicin, the two most effective first line antitubercular drugs. MDR-TB involve young population including women of reproductive age group [1]. India and China account for 50% of the total estimated burden of multidrug resistance tuberculosis worldwide [2]. The incidence of multidrug resistance tuberculosis in India is 1.3% in new cases and 1217% in retreatment cases [3,4,5]. Management issues raised by pregnant patient with MDR-TB are full of controversies and lack of experience [6-8]. Pregnancy per se is not a contraindication for MDR-TB treatment, but has less favorable prognosis. All females of reproductive age group with MDR-TB should be strongly motivated for effective contraception.

Case Report

26-year-old multigravida at 15 weeks gestation presented to emergency OPD with complaints of cough with purulent sputum, abdominal distension and bilateral lower limb swelling for

3 weeks. She had conceived spontaneously and ultrasonography done at 14 weeks revealed live fetus with corresponding gestation and significant maternal ascites.

In her past history, she was diagnosed to have pulmonary tuberculosis 10 year ago during her first conception and received antitubercular treatment for six months. She was cured and her subsequent two pregnancies at an interval of 3 years were uneventful. She had reactivation of pulmonary tuberculosis 1 year back, again started on drug therapy but stopped of her own and reported with cough, dyspnea, lower limb swelling and progressive abdominal distension.

General physical examination revealed pallor, tachypnea (RR=26/min), right cervical lymphadenopathy, decreased breath sounds on right side, free fluid in abdomen, pedal edema. Blood investigations revealed anemia (Hb=7.5gm %), deranged renal function tests (urea/creatinine =146/4.6), hypoproteinemia and hypoalbuminemia (3.1/1.1) and normal liver function tests (0.18/24/12/348). Chest X-ray showed right lung collapse, sputum smear examination and culture revealed infection with mycobacterium tuberculosis and ultrasonography confirmed ascites along with renal parenchymal disease. Diagnosis of multidrug resistance disseminated tuberculosis (defaulter) was established after sputum examination confirmed mycobacterium tubercular strain resistant

to rifampicin and isoniazid. Patient clinical profile mandated us to start second line drugs and injectable immediately. Decision for therapeutic abortion was taken after full agreement with patient and relatives. Her pregnancy was successfully terminated with oral mifepristone 200 mg followed insertion of 400 microgram misoprostol vaginally. Supportive treatment along with chemotherapy (according to susceptibility) i.e., Levofloxacin, Ethionamide, Pyrazinamide, Ethambutol and Cycloserine along with injectable kanamycin and she was discharged after one week in stable condition with advice to continue the drugs and next follow up.

Discussion

Treatment of gestational multidrug resistance tuberculosis is more complex, controversial and challenging, nonetheless poorly or untreated patients can have adverse consequences on mother and baby. Lack of consensus and limited experience still persist with regard to the treatment of MDR-TB during pregnancy despite existing guidelines [5,9]. The influence of multidrug resistance tuberculosis on maternal health is very important especially in developing countries where this is underestimated. Non-adherence to the standard therapy, malnutrition, religious concepts, access to medical care and illiteracy are the factors that contribute to the acquisition of drug resistance in low resource settings as in our case. Successful management of such patients depends on appropriate individualized therapy considering the relative risk versus benefit for baby and mother. According to fewer guidelines second line drugs are usually deferred till second trimester due to the fear of teratogenicity, however in conditions like co-infection with retrovirus, advanced disease and respiratory failure treatment is recommended immediately irrespective of gestation with informed discussion. In situations where treatment is mandatory before 20 weeks of gestation, patient should be given option to undergo therapeutic abortion in order to avoid potential risks to baby and mother. If patient denies for Medical Termination of Pregnancy (MTP) high risk of disease dissemination along with vertical transmission should be explained and modified regimen in which less efficacious Paraminosalicylic Acid (PAS) is substituted for kanamycin can be considered [10,11]. The treatment in our case was challenging and more complicated as patient had disseminated disease along with renal involvement. It was obligated to start her on aggressive treatment along with injectable in order to prevent dire consequences. Her worsening general conditions and chest x-ray was another hallmark of resistance. Luckily, she agreed upon termination of pregnancy and expelled abortus after first dose of misoprostol. No dose modification was done for mifepristone in

index case as she was having adequate urine output despite deranged renal function tests [12].

So, to conclude, multidrug resistance tuberculosis during pregnancy poses therapeutic challenge due to more controversies than evidence and successful outcome of these patients depend on appropriate, well timed and individualized treatment. We do advocate therapeutic abortion in critically ill patient in order to prevent grievous consequences.

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