

Paradoxical Reaction During Treatment of Complicated Tuberculous Meningitis: A Case Report

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Introduction

The paradoxical reaction in tuberculosis (TB) treatment is defined as deterioration of initial lesion or development of new lesion despite of absence of any other cause of treatment failure. It is uncommon to encounter in rehabilitation setting but can affect significantly patients' clinical course. The authors experienced a case of TB meningitis with paradoxical reaction in the course of anti-TB treatment and rehabilitation afterward. The patient also had underlying ulcerative colitis (UC), and was accompanied by pulmonary TB and neurosyphilis. Hereby the authors report a case of TB meningitis in which unusual clinical course was observed because of paradoxical reaction.

Case report

A 51-year-old male was hospitalized under impression of left anterior cerebral artery (ACA) infarction. He had a long history of UC in remission. Cerebrospinal fluid (CSF) study was performed because severe headache and motor deterioration was found despite regular management of ACA infarction. Eventually he was diagnosed as neurosyphilis and TB meningitis. Meanwhile pulmonary TB was also demonstrated in chest radiograph and CT. Penicillin G anti-TB medication were administered and his condition was improved and transferred to department of rehabilitation medicine. During the course of rehabilitation, cognitive decline and abnormal behavior were evident and brain MRI showed multifocal ring enhancing nodular lesions that were not observed in initial MRI. Paradoxical reaction was suspected and steroid therapy was started. Gradually the patient's functional and neurologic status was improved and lesion size was decreased in follow up MRI. After weaning of four weeks course of steroid treatment, the patient was transferred to local rehabilitation hospital. At 3 months follow up to outpatient clinic, he showed further improvement functionally and neurologically.

Discussion

When paradoxical reactions occur, it is common not to change the anti-TB drugs. Steroids can be administered when the severe symptoms are not controlled. A case of paradoxical reaction in TB meningitis has been reported previously but it was not complicated with other pathologic conditions. In this case, decision to use steroid was difficult because of the possibility of deterioration of neurosyphilis. Eradication of neurosyphilis was confirmed by repeated CSF studies. When a paradoxical reaction occurs, treatment failure, drug resistance, decreased compliance, and co-infection of other strains should

be ruled out and treatment decisions must be made carefully. However, delay in steroid therapy may cause permanent neurologic and functional deficits. Clinicians should be aware of possibility of paradoxical reaction when the patient is clinically or radiographically deteriorated during the treatment course of TB meningitis.