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CASE STUDY: IMPORTANCE
OF EARLY DIAGNOSIS OF
TUBERCULOUS MENINGITIS
USING GENEXPERT MTB/RIF
OF CSF SAMPLES

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INTRODUCTION

Tuberculous meningitis is the most devastating consequence of infection with *Mycobacterium tuberculosis* (TB). Approximately a third of patients die soon after presenting to hospital, and many of those surviving are left with severe neurological sequelae. However, many patients are diagnosed late because initial signs are not specific, and rapid and sensitive diagnostic tests are lacking.

CASE REPORT

A 27 year old Burmese gentleman presented with fever, loss of appetite and headache with diplopia for one month. He had vomiting for ten days and altered behavior (increased agitation) for three days. On examination, patient had neck stiffness with positive meningeal signs and 6th nerve palsy bilaterally. He was treated as meningoencephalitis and commenced on intravenous Ceftriaxone and Acyclovir on arrival. CT Brain with contrast done showed diffuse leptomeningeal enhancement with communicating hydrocephalus. We proceeded with lumbar puncture, which showed a very high opening pressure (above 50 mmHg). Cerebrospinal fluid (CSF) showed elevated protein (1.310) and significantly reduced glucose level. However, CSF cell count

was nil with no acid fast bacteria detected on Ziehl-Neelsen smear. CSF GeneXpert MTB/RIF showed MTB detection at low level with no rifampicin resistance. Patient was commenced on anti-TB medications (Isoniazid, Rifampicin, Streptomycin and Pyrazinamide). A ventriculo-peritoneal shunt was inserted by Neurosurgery Team, which improved patient's level of consciousness. He completed intensive phase of anti-TB treatment for two months and is under maintenance phase for next ten months. His CSF Culture done in Mycobacterial Growth Indicator Tube (Bactec), which took about two weeks to be processed showed no growth.

DISCUSSION AND CONCLUSION

This case illustrates that early diagnosis of TB Meningitis is pivotal for early initiation of treatment and surgical interventions, if needed to prevent severe neurological sequelae. This case also reiterates the role of GeneXpert MTB/RIF as the most sensitive method in diagnosing TB Meningitis compared to other available diagnostic tests.

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CASE STUDY:
HYPERTROPHIC
MENINGITIS WITH
MULTISYSTEM
INVOLVEMENT AS INITIAL
PRESENTATION OF BEHCET'S
DISEASE

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