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International Journal of Research Publication and Reviews

Journal homepage: www.ijrpr.com ISSN 2582-7421

A Case Report on Tubercular Meningitis, Case Under Dots.

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ABSTRACT

Introduction: Tuberculous meningitis (TBM) is the most serious form of Mycobacterium tuberculosis infection. TBM is most common in children under the age of five, with the majority of children presenting in late-stage disease. Although (TBM) , . It is associated with higher rate of serious morbidity and higher mortality rate

Main symptoms & clinical findings: Significant clinical findings c/o a cold abscess that is causing burning pain. B/L legs, as well as swelling over the left leg Potts spine was diagnosed as a c/o left thigh post aspect painful induration and swelling. Its known case of T/B meningitis

The main diagnoses therapeutic interventions, and outcomes: Burning pain. Potting spine B/L legs and swelling over left thigh post aspect, painful induration and swelling.

Treatment started on the day of admission with inj.cefotaxime and intravenous fluid with N/S with inj. Dolo 6 mg TDS on relevant previous treatments with performance. Therapeutic interventions are classified into the following categories: DOTS treatment included a Anti-tubercular drugs are used in various combinations depending on the situation..

A case of T/B meningitis has been identified, patient has been registered for the dots drug regime CAT-I. Physiotherapy advice for strengthening exercises of the B/L upper and lower. As well as breathing exercises.

Nursing Perspectives: Laboratory techniques are needed to improve the speed of TBM diagnosis Clinical trials have not identified the best treatment for TBM, and rising antimicrobial resistance threatens the disease's success.

Conclusion:. CNS disease typically manifests as TB meningitis. Even in countries where CNS infections are common, arachnoiditis is uncommon. Tuberculosis is extremely common.

In TB -endemic countries, TB -related paraplegia is frequently secondary to Pott's disease, a common cause of myelopathy. TB, on the other hand, can cause two other types of myelopathy that are extremely rare and unrelated to Pott's paraplegia.

Key Words: tuberculous meningitis, potts spine, paraplegia

Introduction:

Tuberculous Meningitis is a rare consequence of tuberculosis (TB), especially miliary tuberculosis, that affects some patients. It can also happen if you've been exposed to the bacteria that causes tuberculosis. Mycobacterium Tuberculosis is the germ that causes this type of meningitis.. (16) Tubercular meningitis is most common in children the majority of children have late-stage disease under the age of five. Although Although tuberculous meningitis (TBM) in children is rare, it does exist. It is associated with higher rate of serious morbidity and higher mortality rate.(1,2,4,7) Tuberculosis meningitis is the most severe form of infection caused by Mycobacterium tuberculosis (TBM), which kills or disables more than half of those who become infected. The priority is to identify and treat this deadly disease. Because of other infectious causes, it is always difficult to confirm a diagnosis.(6,8

Patient Information:

Patients' specifics are one-of-a-kind. Complain of weakness, disorientation, and walking difficulties. Symptoms and complaints of primary patients: On examination, the patient appeared disoriented, and regular abdominal breathing was slow. Legs are afebrile, with swelling over the left leg C/O the left thigh on the post aspect.

Past of medical, family, and psycho-social:

An old case of tuberculosis meningitis. He had spondylosis and revels spine and had received treatment. However, swelling over the left leg with painful induration has increased. There was no H/O trauma or a fall. Diabetes mellitus, hypertension There is no family history of T/B-related symptoms.

Clinical Findings: Important clinical findings and significant physical examination (PE).c/o excruciating agony B/L legs, as well as swelling over the left leg Potts spine was diagnosed as a case of C/O left thigh post aspect painful induration and swelling.

Timeline: This episode of care's historical and current information is organised as a timeline. Important clinical findings and significant physical examination (PE).c/o excruciating agony B/L legs, as well as swelling over the left leg Potts spine was diagnosed as a case of C/O left thigh post aspect painful induration and swelling.

Diagnostic Assessment: The proper diagnosis and early causative treatment significantly improve the outcome of the disease.(13) Testing for diagnostic purposes (such as PE, laboratory testing, imaging, surveys).Important clinical findings and significant physical examination (PE).colour doppler research. There is mild subcutaneous oedema in the flexor aspect of the knee.

Suggestions for a brain MRI: MRI findings revealed no obvious abnormalities in the brain parenchyma.

Diagnostic challenges The diagnosis of TBM can be difficult and may be based only on clinical and preliminary cerebrospinal fluid (CSF) findings without definitive microbiologic confirmation(15)The economic situation is extremely poor. TBM must be confirmed with a CSF test. TBM in CSF examination typically reveals lymphocytic predominant pleocytosis, increased protein levels, and low glucose levels (2). The presence of Mycobacterium TB bacilli in the CSF is required for an excellent diagnosis.(17)

Diagnosis: known case of T/B meningitis, potts spine with cold abscess on left thigh on posterior aspect..

Prognosis: Prognosis of TBM largely depends on neurologic status at the time of presentation, and time-to-treatment initiation (15) Prognosis depends on the duration of symptoms and management given. The general state of affairs is stable.. In treating nervous complications of Tuberculosis. DOTS can play a decisive role.

Therapeutic Intervention: Case of Tubercular meningitis has been identified, and the patient has been registered for the dots drug regime CAT-I. Different types of therapeutic interventions are available. Dots therapy DOTS treatment included a four-drug regimen.. These are some examples. Patients were given isoniazid (INH), rifampicin (Rif), pyrazinamide (PZA), and ethambutol for 6-9 months (EMB). Depending on the situation, anti-tubercular drugs are used in various combinations.

Nursing Perspectives: Laboratory techniques are urgently needed to improve the rapid diagnosis of TBM. The pathogenesis of TBM is not well understood

Follow-up and Outcomes: Outcomes as reported by clinicians and patients (if available): The pathogenesis of TBM is not well understood, which limits the development of treatments to improve the outcome

As a follow-up, the following diagnostic and other test results are important: MRI of the brain. MRI findings revealed no obvious abnormalities in the brain parenchyma.

Adverse and unanticipated events: DOTS are abbreviations for dots. Some anti-TB medications, known as first-line drugs, are only used to treat new patients who are unlikely to develop resistance to any of the TB medications. Clinical trials have not found the most effective treatment for TBM, and rising antimicrobial resistance threatens the disease's survival.(3)

Discussion of the relevant medical literature:

Five essential medicines listed as "first line" in WHO-recommended anti-TB treatment regimens (S). Isoniazid (H), rifampicin (R), pyrazinamide (Z), ethambutol (E), and streptomycin . In the management of TBM Multiple drug treatment is required and the drugs should adequately cross the blood-CSF barrier to achieve a therapeutic concentration in the CSF.(10)The first-line drugs are isoniazid, rifampicin, pyrazinamide, streptomycin and ethambutol while second line anti-TB drugs that could be used include ofloxacin, ciprofloxacin, capreomycin, kanamycin, cyclomerize, amikacin, clofazimine and rifabutin. The treatment duration is for 9 to 12 months but this could be extended to 18 to 24 months if there is poor treatment response.(10) Timely treatment dramatically improves the outcome of TBM. When clinical characteristics and CSF findings are indicative of TBM, empiric treatment is required even before microbiologic confirmation. For assumed drug-susceptible TBM, the standard treatment regimen is two months of daily INH, rifampin (RIF), pyrazinamide (PZA), and either streptomycin (SM) or ethambutol (EMB), followed by seven to ten months of INH and RIF. Because of

its strong CSF penetration and high bactericidal action, INH is regarded the most important of the first-line agents. As a result, if PZA is not tolerated, the TBM treatment term should be extended to a total of 18 months. While SM or EMB are commonly used as the fourth anti-TB medication in TBM, none penetrates the CSF well in the absence of inflammation, and both can cause significant side effects.(15)

Discussion:

Tuberculous Meningitis (TBM) is a type of meningitis caused by Mycobacterium tuberculosis, which causes inflammation of the membranes (meninges) around the brain or spinal cord. TBM is a condition that develops over time. Antibiotics and other medications are usually effective in treating the infection. (16) TBM most often presents with more than two to three weeks of fever, neck stiffness, and/or altered sensorium. Cranial nerve palsies and papilledema are more commonly seen in advanced stages of the disease. Patients may also present late with hemiparesis, aphasia, visual loss, seizures, and choreiform movements with the development of complications (9,12,14) Treatment for tubercular meningitis and other forms of tuberculosis is similar.. The initial phase consists of four medication regimens; however, the continuation phase is frequently extended to include the remaining 9–12 months of treatment. (10) A case of severe syringomyelia with intradural extramedullary tuberculoma in a 27-year-old patient was documented in 2007. After completing ATT eight months ago, this patient has acquired paraparesis. She had surgery and was put on ATT and steroids for six months, but she didn't get any better [8]. Following a review of the literature, it is obvious that TBM problems can be treated and prevented with quick identification and accurate management. (14) To promote good outcomes and lower patient morbidity and mortality rates, TBM must be diagnosed and treated as soon as possible. This patient, however, did not demonstrate the normal symptoms of neuroradiological or tuberculoma activity for TBM for unclear reasons. TBM must be confirmed with a CSF test. TBM in CSF examination typically reveals lymphocytic predominant pleocytosis, increased protein levels, and low glucose levels (2). The patient's CSF values, on the other hand, do not match the normal TBM findings. The presence of Mycobacterium TB bacilli in the CSF is required for an excellent diagnosis.(17)

Conclusion:

Prognosis of the disease depends on the duration of symptoms and management given. Physicians need to be vigilant in the evaluation of hearing, the appearance of the optic disc . visual function, motor function, and neurological and mental development on follow-up appointments. There is no time frame to develop neurological sequelae; it can be during treatment or even after completion of treatment. Meningitis is the most deadly form of TB. Especially in people who are HIV-positive. The significant death rate linked with this condition can be greatly reduced with early diagnosis and treatment. In general, treatment should last at least nine months and include at least four drugs that the M. tuberculosis strain is known or presumed to be susceptible. (15) On the basis of the clinical pictures and laboratory findings, decided decision was made to start on anti-TB medication. The idea was to put on two months of intense therapy (isoniazid, rifampicin, pyrazinamide, and ethambutol) followed by ten months of maintenance therapy (Isoniazid and Rifampicin). such as allowing the continuation of anti-TB treatment and reducing severe, adverse drug reactions; it should be continued. given over a course of 6–8 weeks in tapering doses The patient began to exhibit symptoms of progress after receiving frequent treatment, such as being able to hold short conversations and recognise with parents. While still bedridden, occasionally displayed inappropriate irrelevant speech, outbursts of tears, and unintentional movement of all four limbs. Brain MRI scans revealed no meningeal enhancements and were deemed to be normal. or anomalies of the parenchyma On follow-up at the clinic after 3 months of anti-TB treatment, the patient exhibited substantial signs of improvement. (17)

References:

1 Nicolette Nabukeera-Barungi [1], Jo Wilmshurst [2], MuloiwaRudzani [2], James Nuttall [2]

2 Bella Devaleenal Daniel [1], G Angeline Grace [1], Mohan Natrajan [1]

3 The Author 2015. Published by Oxford University Press. All rights reserved. For permissions, please e-mail: journals.permissions@oup.com.

4 Nabukeera-Barungi N, Wilmshurst J, Rudzani M, NuttallJ.Afr Health Sci. 2014 Mar;14(1):143-9. doi: 10.4314/ahs.v14i1.22.

5 Praharaj SS, Sharma MC, Prasad K, Misra NK, MahapatraAK.ClinNeurolNeurosurg. 1997 Feb;99(1):60-2. doi: 10.1016/s0303-8467(96)00589-6.PMID: 9107471

6 Konno S, Sugimoto H, Nemoto H, Kitazono H, Murata M, Toda T, Nakazora H, Nomoto N, Wakata N, Kurihara T, Fujioka T.J Neurol Sci. 2010 Apr 15;291(1-2):114-7. doi: 10.1016/j.jns.2009.12.027. Epub 2010 Feb 8.PMID: 20116807

7 Dhawan SR, Chatterjee D, Radotra BD, Vaidya PC, Vyas S, Sankhyan N, SinghiPD.Indian J Pediatr. 2019 Apr;86(4):371-378. doi: 10.1007/s12098-018-2830-x. Epub 2019 Jan .PMID: 30623313

8 Marais BJ, Heemskerk AD, Marais SS, van Crevel R, Rohlwink U, Caws M, Meintjes G, Misra UK, Mai NTH, Ruslami R, Seddon JA, Solomons R, van Toorn R, Figaji A, McIlleron H, Aarnoutse R, Schoeman JF, Wilkinson RJ, Thwaites GE; Tuberculous Meningitis International Research Consortium.Clin Infect Dis. 2017 Feb 15;64(4):501-509. doi: 10.1093

9. Syeda Naqvi moc.liamg@042itafadeys 2017 May; 9(5): e1222. Published online 2017 May 4. doi: 10.7759/cureus.1222

10. Parth Rali, Hammad Arshad, Eric Bihler, "A Case of Tuberculous Meningitis with Tuberculoma in Nonimmunocompromised Immigrant", *Case Reports in Pulmonology*, vol. 2016, Article ID 9016142, 3 pages, 2016. https://doi.org/10.1155/2016/9016142

11.Komolafe, M.A., Sunmonu, T.A. & Esan, O.A. Tuberculous meningitis presenting with unusual clinical features in Nigerians: Two case reports. *Cases Journal* 1, 180 (2008). https://doi.org/10.1186/1757-1626-1-180

12. Central nervous system tuberculosis. Leonard JM. *Microbiol Spectr.* 2017;5 [PubMed] [Google Scholar]

13 Guziejko K, Czupryna P, Moniuszko A, Grygorczuk S, Kondrusik M, Zajkowska J, Pancewicz S.Przegl Epidemiol. 2013;67(4):629-32, 717-9.

14 Jawad N, McHugh K.Pediatr Radiol. 2019 Oct;49(11):1516-1523. doi: 10.1007/s00247-019-04386-5. Epub 2019 Oct 16.

15 Grace E. Marx, Edward D. Chan, "Tuberculous Meningitis: Diagnosis and Treatment Overview", *Tuberculosis Research and Treatment*, vol. 2011, Article ID 798764, 9 pages, 2011. https://doi.org/10.1155/2011/798764

16.National Organization for Rare Disorders (NORD) 55 Kenosia Ave., Danbury CT 06810 • (203)744-0100

17.Tan JL, Sudzilla N, Alwi MB. Rare clinical presentation of Tuberculous meningitis: a case report. Malays J Med Sci. 2017;24(5):119–123. https://doi.org/10.21315/mjms2017.24.5.14