

Dear Sir or Madam,

Thank you very much for your review and the comments, which were very valuable to us for the revision. We have tried our best to revise the text according to the suggestions and indicated the issues we addressed with red font in the body of the article. Please find more detailed answers to your questions below. We hope that the revisions are satisfactory.

Reviewer 1

QUESTION 1. Clinical infections in neurosurgical oncology: an overview The title suggests that this review will be focused on oncological patients that require neurosurgery. However, it is a review that generally describes infections affecting CNS, and wounds. I would suggest some remarks that I believe implementing will be beneficial for the publication. I would suggest changing the title or focus more on neurosurgical oncology. Which pathogen will cause an abscess depends on the aetiology of the abscess. -> this sentence is obvious and does not add any value to the meaning of this manuscript I would suggest deleting it. In meningitis, low levels of glucose and elevated levels of leucocytes and proteins are present in the cerebrospinal fluid (31,32,35). - that is not entirely true, this CSF result is characteristic for bacterial meningitis, in viral meningitis the glucose level won't be low but normal. In the meningitis "Treatment" part the authors discuss only the treatment for bacterial meningitis - I would suggest adding some information about treatment of viral and fungal meningitis as well. Epidural abscess, Diagnostics: A lumbar puncture is performed to obtain information on the cerebrospinal fluid. - this sentence is obvious and unnecessary, I would suggest deleting it. Treatment: Antibiotic therapy is usually 4 to 6 weeks, and up to 8 weeks if the bone is involved. The antibiotic therapy is usually 4 to 6 weeks (10,28,41). - These two sentences are confusing? It is 4-6 up to 8 wks, the second sentence is unnecessarily placed, I would suggest deleting it. As subdural empyema is an emergency condition, surgical drainage via a borehole or craniotomy and antibiotic therapy are required, preferably after sample collection for microbiological investigations, first empirically (vancomycin, meropenem merodnidazole, ceftriaxone) - in this sentence it looks like using meropenem and ceftriaxone and metronidazole at the same time is recommended. However, we use meropenem instead of ceftriaxone and metronidazole both (it covers G+, G+ and anaerobic bacteria). I would suggest clarifying this sentence. In addition, I would suggest changing "meronidazole" into metronidazole.

ANSWER 1. Thank you. These issues have been addressed in the text and they are marked red or deleted.

Reviewer 2

QUESTION 1. The content of this review is detailed and has strong guiding significance for clinical practice.

ANSWER 1. Thank you for this kind comment.

QUESTION 1. The authors present a paper of clinical interest, which is illustrated by interesting images. The subject falls within the scope of the journal. Description and discussion are well done and well-founded. The bibliography is pertinent and current, but may be expanded (see attached file); However, the text can be improved (see suggestions). The authors can illustrate with MRI of the described topics. Infections with antibiotic-resistant microorganisms are also increasingly common. **REWRITE** Single or multiple lesions with ring contrast enhancement, with internal necrotic restriction on diffusion weighted images (DWI) are often observed in pyogenic abscess. Include the references: de Amorim JC, Torricelli AK, Frittoli RB, Lapa AT, Dertkigil SSJ, Reis F, Costallat LT, França Junior MC, Appenzeller S. Mimickers of neuropsychiatric manifestations in systemic lupus erythematosus. *Best Pract Res Clin Rheumatol.* 2018 Oct;32(5):623-639. Schaefer P, Grant P, Gonzalez R. Diffusion-Weighted MR Imaging of the Brain. *Radiology.* 2000;217(2):331-45. MRI: FLAIR weighted images after contrast has shown to be more sensitive and specific than T1 C+ (Gd) sequence in spotting leptomeningeal enhancement. **INCLUDE:** Vaswani A, Nizamani W, Ali M, Aneel G, Shahani B, Hussain S. Diagnostic Accuracy of Contrast-Enhanced FLAIR Magnetic Resonance Imaging in Diagnosis of Meningitis Correlated with CSF Analysis. *ISRN Radiology.* 2014;2014:1-7. particularly on DWI, as epidural abscess demonstrates restriction. Therefore, MRI with intravenous gadolinium enhancement and DWI are used as the gold standard for the diagnosis of subdural empyema. Describe MRI findings of discitis. Herpes simplex encephalitis is the most common. On T2 and fluid attenuated inversion recovery (FLAIR) weighted images (WI), cortical and subcortical temporal lobe hyperintensity is a finding characteristic of herpes simplex encephalitis. Encephalitis can initially be unilateral, thereafter evolving to asymmetric bilateral involvement. foci of cortical bleeding, areas of restricted diffusion-on diffusion-weighted imaging (DWI)-and gyriform contrast enhancement can also be observed Sureka J, Jakkani RK. Clinico-radiological spectrum of bilateral temporal lobe hyperintensity: a retrospective review. *Br J Radiol.* 2012;85:e782–e792. Bisinotto HS, Jarry VM, Reis F. Clinical and radiological aspects of bilateral temporal abnormalities: pictorial essay. *Radiol Bras.* 2021 Mar-Apr;54(2):115-122. In fungal, neurological infections are diagnosed by MRI (DWI, spectroscopy and contrast are import to the correct diagnosis) In conclusion, include: MRI is essential to the correct and early diagnosis, particularly to detect purulent material with DWI.

ANSWER 1. Thank you. These issues have been addressed in the text and they are marked red. New references were added as advised.