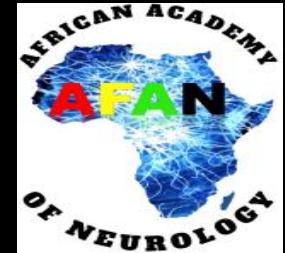




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Common and uncommon infectious causes of neurological diseases in Africa

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Disclosure

- None

Learning objectives

- Define main common and uncommon pathogens responsible of neuro-infectious diseases in Africa
- Define some epidemiological aspects of those diseases
- Describe their main neurological findings and diagnostic methods
- Provide key points of pharmacological treatment of those diseases
- Explain preventive measures, including vaccination

Key messages

- Numerous infectious causes of neurological diseases in Africa
- Challenges for the diagnosis of some diseases
- Awareness of those conditions could help in preventing neurological sequelae
- Availability of some treatment
- Importance of access to preventive treatment

References

- 1-Aderinto N, Alarea K, Basita OMA, Edunb M, Ogunleke P. Prevalence of neuroinfectious diseases and outcomes in Africa. International Journal of Surgery: Global Health (2023) 6:e104
- 2-Barichello T, Rocha Catalão CH, Rohlwink UK, Kuip Mvd, Zaharie D, Solomons RS, van Toorn R, Tutu van Furth M, Hasbun R, Iovino F and Namale VS. Bacterial meningitis in Africa. *Front. Neurol.* (2023). 14:822575. doi: 10.3389/fneur.2023.822575
- 3-Howlett WP. Neurological disorders in HIV in Africa: a review. *Afri Health Sci.* 2019;19(2): 1953-1977. <https://dx.doi.org/10.4314/ahs.v19i2.19>
- 4-Mbacham, W.F., Ayong, L., Guewo-Fokeng, M., Makoge, V. (2019). Current Situation of Malaria in Africa. In: Ariey, F., Gay, F., Ménard, R. (eds) Malaria Control and Elimination. Methods in Molecular Biology, vol 2013. Humana, New York, NY. <https://doi.org/10.1007/978-1-4939-9550-9>
- 5-Oluwayemi IO. Cerebral Malaria. *Malar Chemoth Cont Elimination* 3: 116. doi:10.4172/ 2090-2778.1000116
- 6-Richard Idro, Neil E Jenkins and Charles RJC Newton. Pathogenesis, clinical features and neurological outcome of cerebral malaria. *Lancet Neurology*, 2005; 4(12): 827 – 40
- 7-Idro R, Marsh K, John CC, Newton CRJ. Cerebral Malaria; Mechanisms Of Brain Injury And Strategies For Improved Neuro-Cognitive Outcome. *Pediatr Res.* 2010 Oct; 68(4): 267–274. Doi: 10.1203/PDR.0b013e3181eee738
- 8-Winkler AS. Neurocysticercosis in sub-Saharan Africa: a review of prevalence, clinical characteristics, diagnosis, and management. *Pathogens and Global Health* 2012 VOL . 106 NO . 5 261
- 9-Kennedy PGE and Rodgers J (2019) Clinical and Neuropathogenetic Aspects of Human African Trypanosomiasis. *Front. Immunol.* 10:39. doi: 10.3389/fimmu.2019.00039
- 10-Gerardo Priotto et al. Target product profile: diagnostic test for *Trypanosoma brucei rhodesiense*. *Bulletin of the World Health Organization*; Type: Policy & practice Article ID: BLT.23.290173
- 11-Boubacar S, Diallo IM, Cisse O, Ntenga P, Kaba Y, Fall M, Basse AM, Ndiaye M, Diop AG and Ndiaye MM. Schistosomiasis complications in tropical neurology: A review. *Clin Case Rep Rev*, 2017 doi: 10.15761/CCRR.1000338Volume 3(5): 1-4
- 12-. Carod-Artal FJ. Neurological complications of Schistosoma infection. *Trans R Soc Trop Med Hyg.* 2008;102(2):107-116
- 13- Jose E. H.Pittella. Neuroschistosomiasis. *Brain Pathology* 7: 649-662 (1997)

References

- 14-Vijayan J, Wilder-Smith EP. Neurological Manifestations of Leprosy. *Clin Asp.*
- 15-Mamo E, Bobosha K, Legesse M, Daba F, Debelo K, Leta T, et al. Epidemiological trends of leprosy and case detection delay in East Hararghe Zone, Ethiopia: A - baseline survey. *Lepr Rev.* 2022 Sep 1;93(3):184–96.
- 16-Sekeyová Z, Danchenko M, Filipčík P, Fournier PE. Rickettsial infections of the central nervous system. Samy AM, editor. *PLoS Negl Trop Dis.* 2019 Aug 29;13(8):e0007469.
- 17-Soares CN, Angelim AIM, Brandão CO, Santos RQ, Mehta R, Silva MTTD. Neurobrucellosis: the great mimicker. *Rev Soc Bras Med Trop.* 2022;55:e0567-2021.
- 18-Adekanmbi O, Ilesanmi O, Lakoh S. Ebola: A review and focus on neurologic manifestations. *J Neurol Sci.* 2021 Feb;421:117311.
- 19-Billioux BJ, Smith B, Nath A. Neurological Complications of Ebola Virus Infection. *Neurotherapeutics.* 2016 Jul;13(3):461–70.
- 20-Mehta R, Gerardin P, De Brito CAA, Soares CN, Ferreira MLB, Solomon T. The neurological complications of chikungunya virus: A systematic review. *Rev Med Virol.* 2018 May;28(3):e1978.
- 21-Pinheiro TJ, Guimarães LF, Silva MTT, Soares CN. Neurological manifestations of Chikungunya and Zika infections. *Arq Neuropsiquiatr.* 2016 Nov;74(11):937–43.
- 22-Berkowitz AL, Raibagkar P, Pritt BS, Mateen FJ. Neurologic manifestations of the neglected tropical diseases. *J Neurol Sci.* 2015 Feb;349(1–2):20–32.