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"Complications of Brucella Infection in Previously Healthy Adult Male"

A 36-year-old Mexican immigrant male presented to an outside hospital after being found down in a sugarcane field. On initial presentation he was febrile to 104.7, hypotensive with a GCS of 3. He soon had an episode of emesis, with new onset seizure activity. He was refractory to fluid resuscitation, started on pressors and intubated before being transferred to UMC. Blood cultures drawn and returned positive for Brucella.

While being one of the most common zoonotic diseases worldwide, Brucella infections are reported 100 to 200 times annually in the United States. Typically, Brucellosis presents with malaise, fever, night sweats and arthralgias with neurobrucellosis being a complication in only ten percent of cases [1]. During exam, the patient was nonverbal, responded only intermittently to commands, had severe bilateral subconjunctival hemorrhage, along with persistent tachycardia and fevers. He presented in acute renal failure and required hemodialysis daily. Further diagnostic workup showed extensive microhemorrhages, enhancements in the pons, medulla, right globus pallidus and frontal white matter suggestive of encephalitis and cauda equina arachnoiditis. TTE and TEE returned unremarkable and CT chest showed no evidence of PE. The optimal treatment for neurobrucellosis is still uncertain as data is limited; however, this patient was started on ceftriaxone, doxycycline and rifampin, the current most recommended treatment [2].

Currently he has not had a return to baseline, but mentation has improved. He remains largely nonverbal, using moans to communicate, follows commands intermittently and tracks persons around the room. He has defervesced and tachycardia is improving. His kidney function has not recovered, though he is now having some urine output but still requires regular HD. Further repeat of cultures and CSF cultures have shown no growth to date.

[1] Bosilkovski M, Krteva L, Dimzova M, Vidinic I, Sopova Z, Spasovska K. Human brucellosis in Macedonia - 10 years of clinical experience in endemic region. Croat Med J. 2010 Aug;51(4):327-36. doi: 10.3325/cmj.2010.51.327. PMID: 20718086; PMCID: PMC2931438.

[2] Erdem H, et al Efficacy and tolerability of antibiotic combinations in neurobrucellosis: results of the Istanbul study. Antimicrob Agents Chemother. 2012 Mar;56(3):1523-8. doi: 10.1128/AAC.05974-11. Epub 2011 Dec 12. PMID: 22155822; PMCID: PMC3294949.