

Introduction

Brucellosis is a zoonotic disease transmitted from animals to humans through ingestion of contaminated food products, direct contact, or contact with infected tissue or fluids. World-wide Brucellosis is the most common zoonosis. Brucella infection enters through the reticuloendothelial system and can infect multiple organ systems. Sub-acute onset of fever with a variable course, B symptoms, or hepatomegaly, splenomegaly, and/or lymphadenopathy may be observed. Neuro-brucellosis can present with agitation, behavioral disorders, muscle weakness, disorientation, and nuchal rigidity.

Case Presentation

Mr. F is a 38-year-old biological male with no significant medical or psychiatric history. He was brought to the hospital directly from the airport after he attempted to open the emergency exit of an airplane. On interview, he was vague and could not clearly explain his symptoms or motivations during the interview. He displayed odd behaviors included spending five minutes arranging his phone charger and drawing on it, claiming to have made a “bunny rabbit”.

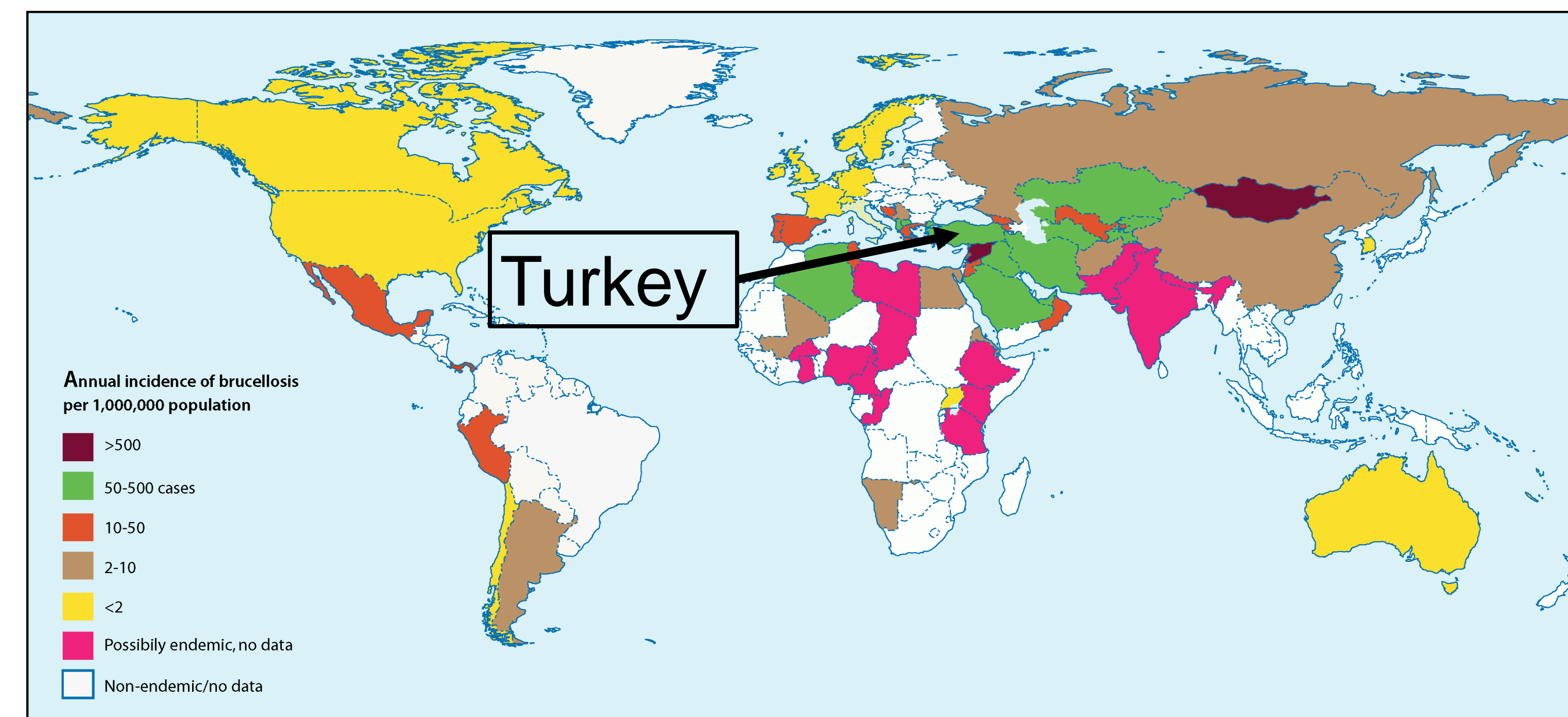
Collateral information from his partner revealed that Mr. F had strange behaviors 5-6 days before hospitalization, while the couple were attending a wedding in Turkey. Mr. F exhibited poor sleep, high energy levels, and inappropriate actions while at the wedding; in particular, wearing a bathrobe to wedding events and doing handstands in the hotel fountain. During this time, Mr. F experienced intermittent low-grade fevers and neck pain. Notably, Mr. F had consumed lamb brain during this trip to Turkey, a local delicacy.

Case Presentation, continued

On admission, Mr. F’s vital signs were significant only for tachycardia to 109. Neuroimaging and initial serum laboratory testing was unremarkable, however, CSF studies revealed 20 white blood cells. Physical exam was remarkable for meningeal irritation with pain during passive and active neck flexion.

Mr. F was treated empirically with ceftriaxone and acyclovir and quickly improved to his baseline as per clinical interview and family assessment. Several weeks after admission, serum serologies returned revealing positive IgE antibodies for Brucella.

World-Wide Incidence of Brucellosis



Discussion

The prompt identification of reversible causes of psychosis is of critical importance to preventing inappropriate and unnecessary treatment courses. In this case, Mr. F presented with minimal signs and symptoms of meningitis or infection generally, however, careful history of exposures, contemplation of abnormal lab results, and prompt treatment resolved patient’s psychotic symptoms.

Conclusions

In this report, we present a case of neuro-brucellosis, the most common zoonosis in the world, presenting with subtle signs and symptoms of infection, but with resolution of psychotic symptoms after antimicrobial treatment. Psychotic patients with an unusual course, a history of travel to areas endemic for brucella, and exposures to infected animals or animal materials should be evaluated for neuro-brucellosis as an etiology of their presentation.

References

1. Pappas, G., Akritidis, N., Bosilkovski, M. & Tsianos, E. Brucellosis. *N Engl J Med* **352**, 2325–2336 (2005).
2. Mantur, B., Amarnath, S. & Shinde, R. Review of Clinical and Laboratory Features of Human Brucellosis. *Indian Journal of Medical Microbiology* **25**, 188–202 (2007).
3. Guven, T. *et al.* Neurobrucellosis: Clinical and Diagnostic Features. *Clinical Infectious Diseases* **56**, 1407–1412 (2013).
4. Montazeri, M., Sadeghi, K., Khalili, H. & Davoudi, S. Fever and Psychosis as an Early Presentation of Brucella-Associated Meningoencephalitis: A Case Report. *Medical Principles and Practice* **22**, 506–509 (2013).
5. Annesley, P. T. Schizophreniform Psychosis with Chronic Brucellosis. *The British Journal of Psychiatry* **114**, 353–354 (1968).
6. MOUSA, A. R. M. *et al.* Brucella Meningitis: Presentation, Diagnosis and Treatment - A Prospective Study of Ten Cases. *QJM: An International Journal of Medicine* **60**, 873–885 (1986).
7. Ariza, J. *et al.* Perspectives for the Treatment of Brucellosis in the 21st Century: The Ioannina Recommendations. *PLOS Medicine* **4**, e317 (2007).