

**Conclusion:** Our study agrees with previously reported data regarding seizure being the most common presenting complaint, generalized seizures being the most common type. The increasing risk of active lesions with increasing duration since the last visit to an endemic country raises the concern of clinically consequential delay in diagnosis.

**Disclosures:** All Authors: No reported disclosures

### 352. Seronegative Relapse of Brucellosis in the Central Nervous System

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**Session:** P-11. CNS Infection

**Background:** Brucellosis is the most common zoonotic infection in the world. High risk areas include the Mediterranean Basin, Eastern Europe and the Middle East. Clinical presentation is quite heterogeneous.

CNS involvement (neurobrucellosis) varies widely, from 0,5 to 25%. This reflects a high prevalence in endemic areas and the lack of established criteria for a diagnosis. We present a patient with a seronegative relapse of brucellosis, confined in the CNS, identified by Brucella IgG ELISA and 16S rRNA sequencing.

**Methods:** Case Report

**Results:** A 60-year-old man, farmer, with a history of systematic brucellosis two years before admission, presented with high fever, headache and agitation. A serum agglutination test and anti-*Brucella* IgG ELISA were negative at baseline. Spinal tap revealed lymphocytosis and low glucose. CSF culture was negative. The patient received ceftriaxone, ampicillin and acyclovir with an initial remission. A week later the patient's symptoms relapsed. Administration of ceftriaxone and acyclovir was reinitiated with clinical improvement, however, lymphocytic meningitis persisted even after 15 days of treatment.

Brain MRI demonstrated nonspecific white matter hyperintensities and severe meningitis as identified by contrast-enhanced 3D Flair MRI. CSF oligoclonal bands showed intrathecal immunoglobulin synthesis. CSF agglutination tests and CSF IgG ELISA were positive for Brucella. Though CSF PCR for *Brucella* was negative, 16S rRNA sequencing revealed the presence of *Brucella* spp. Patient was treated with ceftriaxone and dexamethasone and despite an initial worsening of neurological symptoms of tremor, loss of balance, hearing loss and diplopia, a clinical remission was achieved after a month and a laboratory remission after eight months of treatment.

Brain MRI: 3D Flair Sequence with Contrast Enhancement

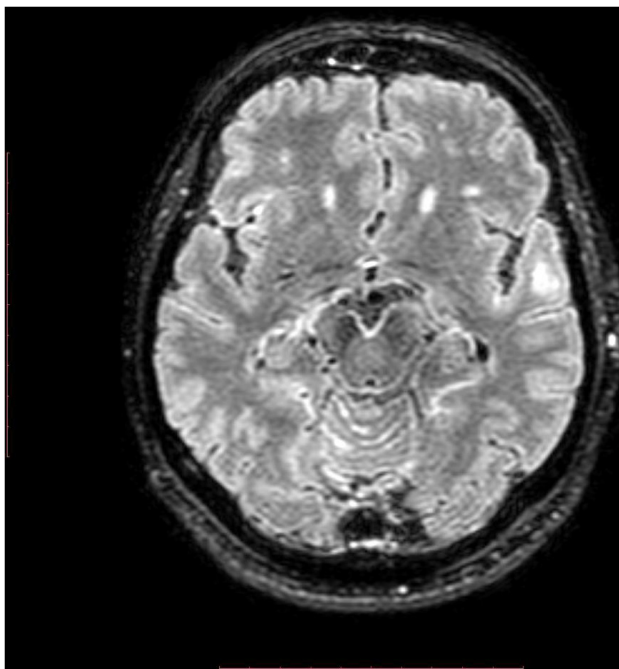


Table. CSF Parameters

| CSF Parameters (normal range) | WBC/mm <sup>3</sup> (0-8/mm <sup>3</sup> ) | Protein (mg/dl) (15-60 mg/dl) | Glucose (mg/dl) (40 - 70mg/dl) | Oligoclonal bands | Brucella IgG ELISA index (<1,09) |
|-------------------------------|--|-------------------------------|--------------------------------|-------------------|----------------------------------|
| Initial puncture              | 315  | 187                           | 39                             | T2                | CSF: 5,06 Serum: <1,09           |
| First month                   | 180  | 197                           | 27                             | T4                | CSF: 4,7 Serum: 4,4              |
| Second month                  | 297  | 73                            | 71                             | T2                |                                  |
| Fourth month                  | 23   | 114                           | 42                             | T2                |                                  |
| Fifth month                   | 82   | 132                           | 43                             | T2                | CSF: 4,0 Serum: 3,3              |
| Seventh month                 | 58   | 184                           | 40                             | T2                | CSF: 5,1 Serum: 4,2              |
| Seventh and a half month      | 18   | 173                           | 43                             | T2                |                                  |
| Eighth month                  | 9  | 145                           | 47                             | T2                |                                  |

**Conclusion:** Neurobrucellosis presents with a variety of clinical symptoms and it should always be considered in neurological patients in highly endemic areas. Establishing a diagnosis is challenging. In our patient, CSF oligoclonal bands and the agglutination test in the CSF helped in achieving a diagnosis, suggesting their possible role in the diagnostic criteria. Although still under debate, the use of corticosteroids in our patient as well as the prolonged use of ceftriaxone in the therapeutic regime were crucial.

**Disclosures:** All Authors: No reported disclosures

### 353. Starry Night, Starry Bright, A Lil' Doxy Will Help You See the Light

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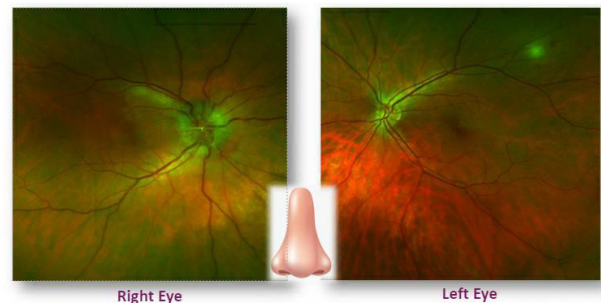
**Session:** P-11. CNS Infection

**Background:** Bartonella henselae neuroretinitis (BHNR) is a rare complication of cat scratch disease (CSD) occurring in 1-2% of cases. BHNR requires prompt diagnosis and treatment to prevent potential vision loss. Doxycycline, in combination with rifampin, is considered the treatment of choice. Empiric therapy is often started based on clinical suspicion prior to serologic confirmation. We present a case of BHNR requiring doxycycline graded challenge.

**Methods:** We report a case of a 45-year-old female with a past history of multiple sclerosis treated with natalizumab presenting with acute right-sided vision loss. She reported suffering a cat scratch 6 weeks prior and had noteworthy tick exposure. She was admitted to our hospital for progressively worsening vision loss. MRI brain demonstrated right-sided enhancement consistent with retinitis. Ophthalmology exam suggestive of infectious papillitis, neuroretinitis, and granulomatous inflammation.

**Results:** Infectious diseases (ID) was consulted with concern for BHNR and a history of a severe tetracycline allergy, throat swelling age 17. Given declining vision and a differential including both Lyme disease and BHNR, the decision was made to empirically treat with doxycycline while awaiting serologic studies. She successfully underwent doxycycline graded challenge (10mg administered IV followed by 100mg administered IV one hour later) and ultimately completed a 6-week course of doxycycline in combination with 2 weeks of rifampin followed by 4 weeks of azithromycin. Bartonella serologies returned positive 1:256 and her Lyme screen was negative. At her 6-week follow up, her vision had significantly improved but not yet returned to baseline.

Retina images



Visual field testing