medical sciences forum

Conference Report

Abstracts of the 3rd International Electronic Conference on Biomedicines

Felipe Fregni, Allan Stensballe, Georgia Levidou and Serafino Fazio

MDPI

https://doi.org/10.3390/msf2025034001

Background: Neurobrucellosis is a rare and potentially life-threatening complication of brucellosis, a zoonotic infection caused by Brucella species. It can present with a wide range of neurological symptoms, making its diagnosis challenging.

Case Presentation: We report a rare and challenging case of neurobrucellosis presenting as pyrexia of unknown origin (PUO) and meningoencephalitis in a 45-year-old male. The patient presented with a 2-month history of fever, headache, and confusion. Extensive investigations, including blood cultures, imaging studies, and serological tests, were inconclusive. Brucella serology was eventually performed, revealing high titers of anti-Brucella antibodies.

Diagnosis and Treatment: The patient was diagnosed with neurobrucellosis and treated with a combination of antibiotics, including doxycycline, rifampicin, and streptomycin. He showed significant clinical improvement, with the resolution of fever, headache, and confusion.

Discussion: This case highlights the importance of considering neurobrucellosis in the differential diagnosis of PUO and meningoencephalitis, particularly in patients with a history of exposure to animals or the consumption of unpasteurized dairy products. Early diagnosis and treatment are crucial to prevent long-term neurological sequelae and improve outcomes. A thorough medical history, physical examination, and diagnostic workup are essential for the early detection and treatment of this potentially life-threatening condition.

Conclusions: Neurobrucellosis is a rare and challenging diagnosis that requires a high index of suspicion. This case report emphasizes the importance of considering neurobrucellosis in the differential diagnosis of PUO and meningoencephalitis, and it highlights the need for prompt treatment to improve outcomes. Clinicians should be aware of the clinical manifestations and diagnostic challenges of neurobrucellosis to ensure its timely and effective management.

8.5. Pharmacological Approaches in Amyotrophic Lateral Sclerosis: A Systematic Review of Clinical Trials on Efficacy, Survival, and Safety Profiles

Pedro Tomé [1], Fernando Moreira [2], Marlene Santos [2]

1. Farmácia Avenida, Porto, Portugal
2. REQUIMTE/LAQV, Escola Superior de Saúde, Instituto Politécnico do Porto, Rua Dr. António Bernardino de Almeida, 4200-072, Porto, Portugal

Amyotrophic lateral sclerosis is a progressive neurodegenerative disease that results in the deterioration of neuromuscular connections, with no effective treatment currently available. The present study aimed to synthesize clinical trial data regarding pharmacological approaches in amyotrophic lateral sclerosis, focusing on the impact of various drugs on the Amyotrophic Lateral Sclerosis Functional Rating Scale (ALSFRS-R), patient survival, and safety profiles. A systematic review was conducted following the PRISMA 2020 guidelines (PROSPERO ID: CRD42023373675). The inclusion criteria consisted of clinical trials published in Portuguese, Spanish, or English, with participants diagnosed solely with amyotrophic lateral sclerosis and no other comorbidities. The exclusion criteria were systematic reviews, meta-analyses, and studies involving patients with additional health conditions. A total of 616 articles were identified through databases such as PubMed®, Cochrane Library®, ScienceDirect®, and Clinical Trials®. After applying selection filters, 37 articles met the inclusion criteria. Data from these studies were extracted into a table, detailing authors, publication year, sample size, clinical trial phase, and endpoints, including ALSFRS-R scores, survival rates, and adverse events. Regarding survival, Edaravone demonstrated a significant survival benefit, with the active treatment groups living longer than the placebo groups. Other promising treatments, such as Sodium Phenylbutyrate and Taurursodiol, reduced mortality and hospitalizations, offering hope for improving

patient outcomes. Tofersen also showed a survival increase, indicating substantial clinical potential. Safety profiles revealed common adverse effects, including headaches, dizziness, gastrointestinal issues, and increased fall risks, primarily affecting the nervous and digestive systems. These findings highlight the importance of careful risk–benefit evaluation in ALS treatment. Although the results indicate positive therapeutic developments, further trials are essential to confirm the long-term safety and efficacy of these treatments.

8.6. Pulmonary Mycobacterium Chimaera Intracellulare: A Rare Case Report

Brijesh Koyani [1], Avani Mendpara [2]

1. Consultant Chest Physician at H J Doshi Hospital, Rajkot, Gujarat (India)
2. Consultant Physician at H J Doshi Hospital, Rajkot, Gujarat (India)

Abstract: We report a rare case of pulmonary Mycobacterium chimaera intracellulare infection in a 69-year-old female with a history of pulmonary tuberculosis. The patient presented with chronic cough, weight loss, and shortness of breath and was successfully treated with a combination of antibiotics.

Introduction: Mycobacterium chimaera intracellulare is a rare and emerging pathogen that can cause pulmonary disease, particularly in immunocompromised individuals. We present a case of pulmonary Mycobacterium chimaera intracellulare infection in a 69-year-old female with a history of pulmonary tuberculosis.

Case Presentation: A 69-year-old female with a history of pulmonary tuberculosis presented to our hospital with a 3-month history of chronic cough, weight loss, and shortness of breath. Chest imaging revealed bilateral lung nodules and cavitations. Sputum samples were positive for Mycobacterium chimaera intracellulare, confirmed by molecular testing.

Treatment and Outcome: The patient was treated with a combination of antibiotics, including clarithromycin, rifampicin, and ethambutol. She showed significant clinical improvement, with the resolution of the symptoms and radiographic findings. The patient was treated for 12 months, with regular follow-up appointments to monitor her progress.

Discussion: This case highlights the importance of considering Mycobacterium chimaera intracellulare in the differential diagnosis of pulmonary infections, particularly in patients with a history of pulmonary tuberculosis. Early diagnosis and treatment are crucial to prevent disease progression and improve outcomes.

Conclusions: Pulmonary Mycobacterium chimaera intracellulare infection is a rare but important diagnosis to consider in patients with pulmonary symptoms and a history of tuberculosis. Prompt treatment with antibiotics can lead to significant clinical improvement and the resolution of symptoms.

8.7. The SAP–WASP–DGKα Axis in Rare Hematological Diseases

Elisa Gorla [1,2], Luisa Racca [1,2], Sara Centonze [1,2], Sabrina Mula [3], Giulia Rossino [3], Valeria Malacarne [1,3], Marcello Manfredi [1,2], Davide Corà [1,2], Alessandra Bertoni [1], Andrea Graziani [4], Gianluca Baldanzi [1]

1. Department of Translational Medicine, University of Piemonte Orientale, 28100 Novara, Italy
2. Center for Translational Research on Allergic and Autoimmune Diseases (CAAD), University of Piemonte Orientale, 28100 Novara, Italy
3. Department of Molecular Biotechnology and Health Sciences, Molecular Biotechnology Center (MBC), University of Turin, Turin, Italy
4. Department of Molecular Biotechnology and Health Sciences, Molecular Biotechnology Center (MBC), University of Turin, Turin, Italy