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bilateral miliary changes. Five years previously his daughters had both been treated for isoniazid and ethambutol resistant TB and he had received TB preventive therapy with rifampicin. Computed tomography scanning showed diffuse bilateral tiny nodules in the lungs, enlarged mediastinal, hilar and abdominal lymph nodes with splenomegaly. He subsequently developed headache and complex partial seizures. Lumbar puncture and MRI brain were normal. Early diagnostics on induced sputum were inconclusive. Staining tests were nonconcordant and the direct PCR test detected MTB DNA but not to a reportable amplification level. This led to a clinical decision to pursue further tissue sampling. Endobronchial ultrasound and mediastinal lymph node biopsy showed histology typical of sarcoidosis with poorly defined, non-caseating granulomas and foci of dystrophic calcification. Tissue staining for mycobacteria and fungi was negative. A serum ACE level was markedly elevated at 264 U/L. Seizures remained controlled on levetiracetam, his cough improved and the clinical syndrome remitted without steroids.

Key learning points drawn from this case include: the diagnostic overlap between tuberculosis and sarcoidosis both clinically and histopathologically, pitfalls of TB PCR testing and choice of empirical and preventive therapy options for potential multi-drug resistant TB.

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16 An unusual pathogen in post-operative discitis

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Abstract

Bacillus cereus is an organism most commonly associated with self-limiting gastroenteritis, however increasingly recognised as a rare but important cause of extra-gastrointestinal infection. The ubiquitous nature of this environmental organism, alongside its spore forming ability, means it has the potential to survive in healthcare settings where it may be a source of nosocomial infection. This case demonstrates the role of *B. cereus* as an unusual pathogen in post-operative discitis, in a young, healthy, immunocompetent individual. A 25 year old gentleman who had recently undergone L4/5 decompression and microdiscectomy presented 3 weeks later with cauda equina syndrome, with MRI spine suggestive of an infected extradural collection and L4/5 discitis. Subsequent redo L4/5 discectomy and wound washout isolated *B. cereus* from 3 of 6 theatre samples. IV Vancomycin was administered before rationalising to IV Teicoplanin to complete a 6 week course, with post-treatment MRI showing reduction in abscess size. The distinction between pathogen and contaminant can be difficult to differentiate and due to the ubiquity of *B. cereus* in the environment, culture of this organism is often considered of questionable clinical relevance. Whilst the significance of *B. cereus* will vary on a case-to-case basis, this case echoes an evolving literature base demonstrating the spectrum of infection it may cause, as well as a potentially underestimated role in post-operative infection. Given the common resistance of *B. cereus* to penicillins and beta lactams, an awareness of this organism is of particular importance given it may not be covered by empirical antibiotic regimens.

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17 COVID-19 vaccine hesitancy among a UK cohort of patients living with HIV

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Abstract

Introduction: There is evidence that people living with HIV (PLWH) have a higher risk of death and hospitalisation from COVID-19, particularly those with low CD4 counts or detectable viraemia. There have been calls to prioritise vaccination for PLWH globally, with early access to vaccination available in the UK.

Methods: We performed a retrospective review of 200 sequential patients booked into HIV clinic within Sheffield Teaching Hospitals between November 2021 and January 2022 collecting HIV treatment and vaccination uptake (VU) data.

Result: In this cohort of PLWH, triple VU by age closely matched national vaccination rates (89% in the 60-64 age group vs 84% nationally and 42% vs 43% in the 30-39 age group). Within the cohort there was no significant difference in VU between ethnic groups (white 89%, black 90%, asian 100% ($p = 0.57$)). There was a significant difference in VU in those with detectable viraemia, with 42% having received ≥3 vaccinations, compared with 69% in the undetectable group ($p = 0.016$). There was a similar difference for those with known treatment adherence issues (50% vs 70% ($p = 0.002$)).

Discussion: To our knowledge, this is the first study looking at COVID-19 vaccine uptake amongst PLWH within the UK. We identified patients most at risk of severe outcomes from COVID-19, are the least likely to be fully vaccinated. The same methods used to engage patients with antiretroviral treatment is likely to be of benefit in increasing VU. Understanding the reasons for both poor adherence and poor VU would enable improved healthcare engagement with this population.

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18 A sweet smelling rose or something fishier afoot?

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Abstract

A 50-year-old man was seen in dermatology clinic with a two month history of inflammation of his left little finger and tender nodules on his left arm. They were ulcerated and oozing pus.

One month later he had extensive disease of his hand and limited flexion of fourth and fifth digits. Throughout his left hand and arm were numerous purplish nodules, 3-4cm in diameter. He had no lesions elsewhere and was systemically well.

His past medical history included poorly controlled type 2 diabetes and hypertension. Of note he was a gardening enthusiast with pets.

Baseline bloods including a vasculitic screen, were normal. Skin biopsy showed granulomatous inflammation with scanty acid-fast organisms. Culture was positive for *Mycobacterium marinum.* He started clarithromycin and ethambutol with good response. A routine HIV test was positive, viral load of 256,000 copies/ml and CD4 of 30 cells/μL. One month into Mycobacterial treatment, he started Truvada and dolutegravir. His HIV PCR dropped to 104 copies/ml after one month of ARVT. However, his arm lesions dramatically deteriorated and a new lesion appeared on his left ankle. Repeat skin biopsy was negative for *M.marinum.* A diagnosis of immune reconstitution inflammatory syndrome was made and his skin lesions improved without specific treatment.

Lessons learnt include; the value of routine HIV testing in the outpatient setting in those not considered high risk. Although rare, clinicians need to be aware of the possibility of *M.marinum* IRIS in HIV especially if failure of therapy has been excluded.

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