MUSCULOSKELETAL INFECTION CAUSED BY MYCOBACTERIA

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Tuberculous arthritis/osteomyelitis remains prevalent in low- and middle-income countries. There is now a resur gence across the world as a consequence of migration and immunocompromise (including human immunodeficiency tuberculosis . Around half of all cases a ff ect the spine, typically - manifesting as para-discal infection but also causing discitis and vertebral osteomyelitis. Native joint infection typically presents with monoarticular pain in a weight-bearing joint. For optimal management of tuberculosis, the patient must be referred to a specialist multidisciplinary team for input that includes the following components. /uni25CF Baseline screening for HIV and other blood-borne viruses. /uni25CF Assessment for other sites of mycobacterial infection. /uni25CF Measurement of baseline renal and liver function, to be repeated at intervals throughout treatment. Drug-induced hepatitis is the commonest serious side e ff ect that may re - quire temporary withdrawal or alteration of therapy . /uni25CF Baseline and follow-up testing of hearing (if injectable agents to be used) and colour vision (if ethambutol to be - used). /uni25CF Consideration of any potential drug interactions (rifampi - cin is a potent inducer of the cytochrome P450 system; it can interact with many classes of drug, including anticon - vulsants, antiretroviral therapy , anticoagulants, antibiotics and antifungals). /uni25CF Institution of appropriate infection control precautions - and contact tracing. /uni25CF Appropriate education and support to optimise adherence to therapy . /uni25CF Prescription of an appropriate combination of drug ther - apy . /uni25CF For fully sensitive M. tuberculosis , the preferred regimen is oral rifampicin, isoniazid, pyrazinamide and etham - butol for 2 months, followed by rifampicin and isonia - zid for a further 4 months. /uni25CF Worldwide, there is an increase in the prevalence of - drug-resistant tuberculosis, classified as multidrug re - sistant (MDR) and extensively drug resistant (XDR). Infection with these organisms requires a treatment regimen that includes an injectable agent (typically ami - kacin, kanamycin or capreomycin) together with oral agents selected according to the susceptibility profile of the isolate (these may include cycloserine, ethionamide, para-aminosalicylic acid [PAS], fluoroquinolones and linezolid). Prolongation of therapy is r equired, and side e ff ects/toxicity are common. /uni25CF Surgery is only recommended to decompress or stabilise the spine and occasionally to confirm the diagnosis by tis - sue biopsy . Non-tuberculous mycobacteria are ubiquitous environmen - tal organisms. They are best recognised as agents of disease in patients with underlying immunocompromise (including HIV , diabetes and organ transplantation) or other risk factors for introduction of infection (such as penetrating trauma or the presence of a pr osthesis). However, they may occasionally also cause infection in hosts without obvious risk

factors. Treatment can be di ffi cult; these organisms are resistant to the standard agents used for first line antituberculous therapy; surgery to debride and drain sites of infection can therefore be - particularly important to reduce the bacterial burden. There is no single standardised drug regimen or duration, so choice of and length of treatment depends on the location of disease; extent of surgical debridement; the identification and pheno typic characteristics of the organism; and the patient’s underly ing condition, presence of immunocompromise and response to therapy . As for treatment of M. tuberculosis , expert medical oversight is crucial throughout treatment.
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