International Pathology Day 2024

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"UNMASKING THE UNSEEN: A CASE OF CRYPTOCOCCAL OSTEOMYELITIS IN A RESILIENT YOUNG GIRL"

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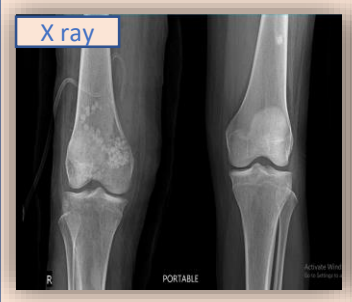
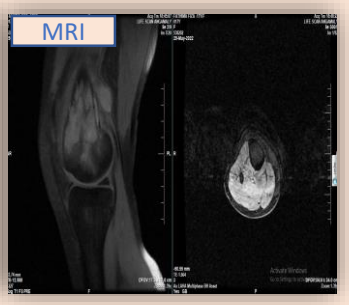
***Introduction**:Cryptococcal osteomyelitis is an uncommon manifestation of cryptococcal infection, typically associated with immunocompromised states. However, recent reports highlight its occurrence in immunocompetent individuals, particularly those with potential environmental exposures. This case study explores a rare incidence of cryptococcal osteomyelitis in an otherwise healthy young girl who had close contact with pet birds, underscoring the need for heightened awareness among clinicians. This poster presents a detailed account of the clinical presentation, diagnostic challenges, and therapeutic management of a unique case*

Case summary : A 17 year old healthy girl having pet pigeons presented with pus discharge from right femur since seven months. This was initially managed with conservative measures. An incision and drainage procedure was performed at another hospital, but routine pus culture showed negative growth.

Imaging Findings





Further X-ray showed lytic area in right femur medial condyle and MRI showed 42x32x28 mm lesion in metadiaphyseal region of distal femur with peripheral enhancement. Erosion and marrow oedema noted.

CT Thorax: Conglomerate lobulated necrotic soft tissue in Para tracheal region with necrotic lymph nodes - **Highly suggestive of tuberculosis**

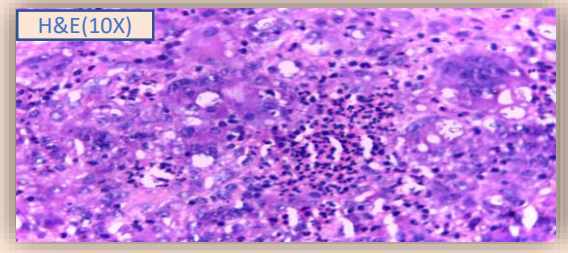
Arthrotomy and Aspiration: 8 cc of thick pus obtained and sent for microbiological and histopathological analysis

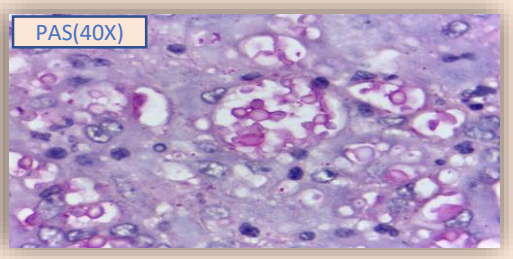
Discussion

Cryptococcal infections are mostly seen in immunocompromised patients but can very rarely in immunocompetent patients. Most commonly affects immunocompromised patient's lungs or central nervous system. Cases of vertebral cryptococcal osteomyelitis have been reported in HIV-negative patients with predisposing factors such as sarcoidosis, tuberculosis, steroid therapy, lymphoma, leukemia and diabetes .

Our case describes a young immunocompetent girl with cryptococcal osteomyelitis most likely occurring due to the patient's exposure to pigeon excreta with initial asymptomatic lung involvement and intermittent fungemia leading to seeding of the affected joints. There is limited information available concerning the treatment of cryptococcal osteomyelitis in immunocompetent patients because of the disease's rarity.

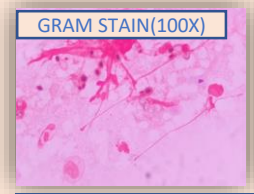
Histopathology

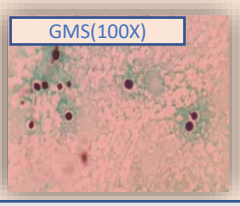


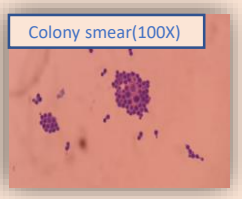


Histopathology examination showed multiple fragments of fibro connective tissue with dense neutrophilic infiltration forming abscesses, surrounded by palisading epithelioid histiocytes forming granulomas. PAS stain on biopsy tissue showing budding yeast forms

Microbiology







Gram stain, GMS and Colony smear from the culture growth showing stain showing budding yeast cells

Cryptococcal Antigen test from Blood : (immunochromatography method) positive.

DIAGNOSIS:CRYPTOCOCCAL OSTEOMYELITIS

Treatment and follow-up: Fluconazole 400 mg daily for six months (based on guidelines of Infectious Diseases Society of America) ,resulting in clinical improvement and wound healing, with follow-up imaging showing a reduction in lymph node size

References

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