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DEEP FUNGAL INFECTION OF FOREARM MIMIKING AS A CHRONIC TUBERCULAR INFECTION- VERY RARE CASE REPORT

Plastic Surgery

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ABSTRACT

Introduction: Fungal infections are usually opportunistic infection and commonly occurs in immunocompromised patients having other diseases superimposed by fungal infection. Fungal infections commonly affect the skin, nails and mucous membrane. In our case report a five year old child present with hand infection which mimicking tubercular but found to be fungal infection. **Results:** After patient presentation to us with multiple discharging swellings, all routine workup along with the culture sensitive of discharge was done as per protocol and empirical antibiotic treatment was given then after identifying underlying pathology patient was treated according to culture sensitivity and good outcome was achieved. **Conclusion:** Fungal infections are apportunistic infections but they can be present in immunocompetent patient and can mimic other similar diseases like tuberculosis. Proper identification of causative agent and targeted treatment to that particular agent is essential for good outcomes

KEYWORDS

INTRODUCTION

Fungal infections are usually opportunistic infections, affect the immunocompromised individuals. Commonly involved parts are skin, nails and mucus membrane. Fungal infections of the hand in children are usually involving superficial layers of the skin and nails, especially in tropics. Such infections usually present as rash, itching, and redness. Deep fungal infections in the hand have been reported in immunocompromised hosts as opportunistic infections[1,2].

Occasionally chronic hand infections can present to surgeon and pose a diagnostic dilemma. Delay in diagnosis occurs, as bacterial and fungal infections can mimic each other. A strong index of suspicion is required and tissue samples for both histopathologic and microbiologic studies must be obtained to establish the diagnosis.

In this case study, a 5 years female child admitted in Department of Burns and Plastic Surgery with complaint of multiple spontaneous swellings over dorsal aspect of right mid forearm for last 6 months. Swelling was insidious in onset and on and off, associated with spontaneous rupture followed by pus discharge. Gradually increasing the involved area with development of new swellings and Induration of skin. Patient has no complaint of Fever, weight loss, cough and had no history of contact and family history of tuberculosis. Patient had history of taking antibiotics for her complaint and had history of incision and drainage of swelling but with no improvement in her problem.

Figure1. On admission: Showing indurated skin with pus discharge from swelling

Figure 2. After 5 days of starting antifungal: Showing reduced size of swelling with absent pus discharge

Figure 3. Two months after taking antifungal treatment: swellings were subsided with no residual induration of skin.

Patient was investigated with all basic routine investigation along with pus discharge from multiple sinuses in swelling was sent for routine microscopy, culture sensitivity, KOH staining, AFB staining and CBNAAT. Patient was stared empirically on syrup Amoxiclav 5 ml BD and syrup itraconazole 7.5ml OD. Patient's pus culture report was suggestive of fungal infection with positive for candidal growth.

Patient was sensitive for fluconazole, voriconazole.

Patient was managed conservatively with antifungal medication and started on IV fluconazole 100mg OD for 7 days and discharged on syrup itraconazole for 30 days according to culture sensitivity. Then patient was advised followed up in OPD and Tab voriconazole 100mg BD for next 30 days and responded well with conservative management.

DISCUSSION

Fungal infections of the hands are quite common in children. These are usually superficial infections (dermatomycosis) affecting the skin, interdigital spaces and nails[1].Common in immunodeficient children and usually present with rash and itching[2]. Deep fungal infection affecting the subcutaneous tissue, muscles, tendon sheaths, and even bones and joints of the hand are infrequent, especially in children[1,2]. These are mainly opportunistic infections in immunocompromised individuals. The mainstay of diagnosis is a combination of microbiology and histopathology[3,4] as negative fungal culture is frequently obtained.

Evidence of fungal elements and associated tissue response on histopathology may help in making the diagnosis[3,4]. In this case, the identification of candida on culture made the diagnosis in favor of deep fungal infection. Multiple nodular lesions with centrifugal spread in the forearm of a child has been reported, which was ultimately diagnosed on fungal culture and responded to antifungal therapy[5]. In this case, a variety of broad-spectrum antibiotics were given with poor response before she reported to us. After admission suspecting fungal infection on seeing pus discharge from sinuses, it was sent for staining and microscopy. Identification of fungal hyphae on culture confirmed the diagnosis of deep fungal infection and antifungal agents were added according to sensitivity report leading to a dramatic therapeutic response.

CONCLUSION

It is imperative for the attending doctor to have a high index of clinical suspicion for deep fungal infection in cases of chronic hand infections, especially those not responding to standard antibiotics and those mimicking a chronic granulomatous lesion even if there is no evidence of immunocompromise.

Role Of Evidence Based Medicine

Diagnosis was made on suspicion with following evidence: Multiple chronic inflammatory indurated nodules centrifugally spreading on forearm volar surface with centrally healing scar area and multiple discharging sinuses showing yellowish balls floating in thick serous fluid and non-responding lesion with partial remission on antibiotic therapy 4 times earlier including one incision and drainage for the abscess formed initially. Absence of evidences of cutaneous tuberculosis (negative CBNAT and Mountex test) as differential diagnosis and typical floating balls discharge from sinus and positive fungal staining and cultural were evidence to confirm the diagnosis and response to antifungal treatment was another supportive evidence. ln such cases six week treatment for treating the active lesion and another 6 week antifungal treatment is necessary for cure and prevention of recurrence

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