Nontuberculous Mycobacterium Facial Abscess In A Pediatric Patient: A Case Report

Jeff Wong, MD; Jeremy A. Mock, MD
Geisinger Medical Center, Danville, PA

Geisinger

Abstract

Objective: To discuss a unique case of nontuberculous mycobacterium facial abscess in a pediatric patient.

Study design: Case report

Methods: A 12-year-old immunocompetent female with hx of acne vulgaris who presented with a 3-month history of a worsening soft tissue infection/abscess in the left cheek. There was no known preceding trauma.

Results: The soft tissue infection was refractory to doxycycline. Needle aspiration were sent for AFB cultures which detected co-infection with Mycobacterium avium complex and Mycobacterium fortuitum. Prophylactic treatment comprised of clarithromycin and rifampin for 2 months. She was switched to bactrim and linezolid after culture sensitivity results with near resolution of symptoms

Conclusion: Nontuberculous mycobacterial infection should be suspected in otherwise healthy individuals with facial abscesses refractory to antibiotics that are effective against common bacterial pathogens.

Contact

Jeff Wong
Email: jwong2@geisinger.edu
Phone: 570-271-6429

Introduction

Nontuberculous mycobacteria (NTM) include all mycobacteria species other than tuberculosis and leprae. They are found ubiquitously in the environment and infrequently cause infections in humans[1]. Cutaneous infections caused by NTM are most commonly seen following local trauma or surgical procedures[2]. In children the most common presentation in the head and neck region is cervicofacial lymphadenitis[3]. Cutaneous infections commonly present in the extremities but can present in the head and neck as well[4]. Here we report a case of a nontuberculous facial abscess in a immunocompetent pediatric patient.

Case Report

The patient is a 12 y.o. female who initially presented to her primary care provider with a three-month history of a painful purple lump around her left cheek (Figure 2). Her medical history was remarkable for acne vulgaris. Immunizations were up to date. There was no known preceding trauma. She was treated initially with antihistamines and warm compresses, then with two rounds of doxycycline but symptoms worsened. She was referred to ENT for further evaluation. Physical exam revealed a 3.0 cm tender fluctuant erythematous nodule with central punctum and overlying violaceous skin changes. She was afebrile with no cervical lymphadenopathy.

CT with contrast revealed a well-circumscribed, fluid attenuation collection is seen arising along the superficial cutaneous tissues over the left malar region. This collection measured roughly 1.8 cm x 3.2 cm x 0.7 cm with mild peripheral enhancement (Figure 1).

Case Report (cont.)

A decision was made to aspirate the nodule. Aspirate contained 3ml of slightly cloudy, serous fluid which were sent for pan culture and cytology. AFB cultures grew mycobacterium avium and mycobacterium fortuitum. The patient was referred to infectious disease for further management. She was treated with rifampin and clarithromycin for two months with considerable regression of her infection (Figure 3). She was then switched to Bactrim and linezolid after susceptibilities resulted. Immune testing, CXR, and HIV test were all negative.

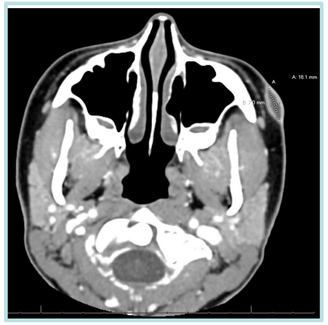

Figure 1. Axial CT scan of abscess

Figure 2. Facial abscess on initial presentation

Figure 3. Post needle aspiration and months of antibiotic therapy

Discussion

Our case highlights a facial abscess in an immunocompetent pediatric patient co-infected with M. fortuitum and M. avium. M. fortuitum is in the class of rapidly growing mycobacteria (RGM), defined as growth in medium within 7 days. RGM infections commonly manifests as localized skin/soft tissue infections in healthy pediatric patients. M. avium is in the class of slow growing mycobacteria. In healthy pediatric patients, the most common manifestation of M. avium is cervical lymphadenitis[3]. Cutaneous infections with M. avium are very rare but could be a first sign of an immunocompromised state[5].

Treatment for cutaneous nontuberculous mycobacteria generally includes multimodal antibiotics and surgical intervention. Isolates of M. fortuitum have been found most susceptible to amikacin, ciprofloxacin, sulfonamides, and imipenem. For M. avium, IDSA guidelines recommend use of chemotherapy agent for 6-12 months. However there have been various case reports showing success with antibiotic therapy as well[6].

Conclusion

Nontuberculous mycobacterial infection should be suspected in otherwise healthy individuals with facial abscesses refractory to antibiotics that are effective against common bacterial pathogens. Cutaneous manifestations include a poorly resolving cellulitis, nodules, ulcerative lesions, and subcutaneous abscesses.

References

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