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Fatal Aspergillosis: A Rare Disease in an Immunocompetent Host

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**INTRODUCTION**

Aspergillosis is a potentially life-threatening fungal infection that can affect immunocompromised and immunocompetent patients. It is most commonly associated with invasive pulmonary aspergillosis (IPA), which can be fatal if not treated promptly. Our case report describes a patient with fatal aspergillosis in an immunocompetent host.

**CASE PRESENTATION**

A 35-year-old female presented with cough, chest pain, and fever. She had no history of immunosuppression. Her initial workup revealed a persistent fever and positive Aspergillus antigen. Despite antifungal treatment, her condition deteriorated, and she ultimately succumbed to the disease.

**CLINICAL COURSE**

The patient's clinical course was characterized by persistent fever, cough, and respiratory distress. She was treated with voriconazole, but despite initial improvement, her condition worsened. The diagnosis of fatal aspergillosis was made post-mortem, with fungal elements found in multiple organs.

**DIAGNOSIS**

Aspergillus species were identified through antigen detection and microbiological cultures. The diagnosis was confirmed histologically.

**TREATMENT**

Treatment with voriconazole and other antifungal agents was initiated, but the patient's condition rapidly deteriorated. Despite aggressive treatment, she developed disseminated disease and passed away.

**DISCUSSION**

Fatal aspergillosis in immunocompetent hosts is rare but is associated with significant mortality. Early identification through targeted diagnostic testing and prompt antifungal therapy are crucial in managing this severe infection.
Salmonella Group C Induced Rhabdomyolysis
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INTRODUCTION
Salmonella enteritidis is a foodborne illness that can present with diarrhea, fever, nausea and abdominal discomfort. It is usually cured after ingestion of undercooked poultry and pork, raw eggs, or unpasteurized milk. Rhabdomyolysis is a very rare but severe complication of Salmonella enteritidis. Snigdha Boddepudi, MD and associates published a series of case reports demonstrating Salmonella enteritidis-associated rhabdomyolysis and its severe complications.

DESCRIPTION
A 55-year-old male presented with fever, abdominal pain, myalgia, and jaundice. Laboratory investigations revealed elevated creatinine phosphokinase (CPK) levels, muscle enzyme levels, and myoglobinuria. Urine analysis revealed no hematuria or casts. Serum creatinine was normal. The patient was treated with intravenous fluids and antibiotics. The patient recovered completely within 7 days.

DISCUSSION
Salmonella enteritidis is a common cause of gastroenteritis but it can also cause severe complications such as rhabdomyolysis, myopericarditis, pancreatitis, and sepsis. Rhabdomyolysis is characterized by muscle pain with CK levels 5-10 times higher than the upper limit of normal. Myoglobinuria can also occur and can lead to tubular injury. The most common causes of rhabdomyolysis are crush injuries, drug abuse, and dehydration. In our patient, these mechanisms were ruled out along with other infectious causes. In Salmonella enteritidis rhabdomyolysis, the proposed mechanism is thought to be the direct invasion of muscle by the bacteria, tissue necrosis, muscle hypotonia, and intracellular calcium concentration, metabolically attending. Moreover, severe hypokalemia is also a well-known cause of rhabdomyolysis, which can occur in diarrhea with Salmonella infection. Treatment includes aggressive fluid resuscitation and antibiotic therapy. Salmonella infection should be considered in those patients presenting with diarrhea and rhabdomyolysis as this case demonstrates that the diagnosis of Salmonella infection can prevent serious complications and lead to good outcomes.

REFERENCES
Epicoccum: An Unusual Fungal Element Presenting as a Pulmonary Nodule in an Asymptomatic Patient

Introduction
A CT scan of the lung revealed a 1.6 x 1.3 cm spiculated nodule in the right upper lobe. A positron emission tomography (PET) scan showed hypermetabolic activity. Quantitative assay, fungal serologies, and susceptibility testing were negative. A bronchoscopy with biopsy and bronchoalveolar lavage were performed to rule out infectious etiology. No acid-fast bacilli or definitive malignant disease was found on the biopsy. The patient elected to proceed with a right upper lobectomy and mediastinal lymph node dissection to rule out a metastasis or malignancy. The nodule was not biopsied. The surgical specimen showed comedonecrotic fungal elements and debris granulomas with fibrotic tissue. Sputum fungal elements and one out of six lymph nodes showed granulomas. There was no evidence of nonspecific or bacterial disease. Epicoccum nigrum was identified on culture and the patient underwent postoperative oral antifungal therapy. He was asymptomatic at 6 months follow up while taking itraconazole.

Discussion
Epicoccum nigrum (also known as Epicoccum purpurascens) is a saprophyte with worldwide distribution. It is a common pathogen for a wide variety of fungi and plants but it is not considered an animal pathogen. It is closely related to other pigmented molds such as Alternaria and Cladosporium which can cause phaeohyphomycosis. Epicoccum species have been identified in the environment and are considered to be allergens that can cause multiple allergic conditions such as hypersensitivity pneumonitis, asthma exacerbation, and multiple allergy skin conditions. Its role as a pathogen remains unclear in non-bone marrow transplant patients. However, this case suggests that in moderate to severe immunocompromised hosts, Epicoccum nigrum can be a potential invasive pathogen. While recovery of the organism in clinical specimens is often attributed to contamination, in the correct clinical setting it should be considered pathogenic. Although the natural history of Epicoccum nigrum infection is not clear, surgical excision in immunocompromised hosts is the correct approach. If the nodule was not biopsied, additional antifungal therapy appears to have been beneficial for isolated pulmonary nodules within the appropriate clinical setting.

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Cardiac Tamponade Secondary to Purulent Pericarditis in a Patient with Ludwig’s Angina and Lemierre’s Syndrome

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Introduction

- Purulent pericarditis is a rare cause of pericardial effusion which requires emergent intervention and intravenous antibiotics.
- We present a case of a 51-year-old male with Ludwig’s angina who developed cardiac tamponade secondary to purulent pericarditis, and was also found to have Lemierre’s Syndrome.

Case Report

- A 51-year-old male presents to the ED with five days of right-sided chest and neck swelling with pain.

VS: BP 160/85 T 99.1F RR 16 SpO2 99% RA

Exam: Notable for swelling, erythema, and warmth beneath midline to right mandible with some extension to neck, and left mandible.

Labs: WBC 34 2 HGB 14 1 PLT 571 Cr 3.3 LA 1.0

GXR: “No acute cardiopulmonary abnormalities”

CT Neck with contrast: “Severe odontogenic-related facial, pharyngeal, parapharyngeal, and retropharyngeal abscess arising from the floor of the mouth and parapharyngeal space”

- The patient was started on IV antibiotics and underwent I & D and suction for further drainage. He was transferred to an inpatient unit where intravenous antibiotics were continued and discharged home with a follow-up plan.

- Follow-up for discharge the patient returned to the hospital five days later with symptoms including headache and shortness of breath.

VS: BP 130/79 T 100.2F RR 22 SpO2 99% RA

Exam: Notable for right neck fluidness, pulse, paradoxic and tachypnea.

Labs: WBC 28.6 HGB 8.2 PLT 502 Cl 0.9

CXR: “Purulent right ventricle and possible widened mediastinum.”

Figure 1: EKG consistent with Pericarditis

Discussion

- Purulent pericarditis accounts for less than one percent of cases of pericarditis. The incidence of cardiac tamponade in purulent pericarditis is lower and mortality ranges from 12% to 50%.

- This case was an unusually presenting as a fever illness, and potentially fatal cardiopulmonary instability.

- Our patient presented with severe odontogenic infection, and subsequently developed of mediastinal enlargement. Untreated purulent pericarditis is fatal and requires early recognition and aggressive treatment is essential. As many as 80% of patients with purulent pericarditis have untreated systemic infection therapy will serve to prevent or prolong survival.

- Management includes intravenous antibiotics, intravenous hydration, and fluid balance, vitamins, appropriate monitoring, and other interventions as above.

- In our institution, echocardiography is performed to confirm the diagnosis of pericardial fluid accumulation.

- In our institutional cases, echocardiography is performed to confirm the diagnosis of pericardial fluid accumulation.

- Patients are generally treated with intravenous antibiotics and pericarditis may be confirmed by echocardiography.

- If pericarditis is not confirmed, patients are generally treated with intravenous antibiotics and respiratory support is provided until the patient’s condition stabilizes.

- In conclusion, early recognition and treatment of purulent pericarditis is essential to prevent serious complications and potential mortality.
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