PRIMARY CUTANEOUS ASPERGILLOSIS IN AN IMMUNOCOMPROMISED PATIENT WITH ACUTE MYELOID LEUKEMIA AFTER BONE MARROW TRANSPLANT

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Background: Fungal infections have an important role when dealing with infections in immunocompromised patients. Aspergillus species are among the most common fungi causing these infections. Invasive aspergillosis is estimated to occur in 5-13% of recipients of bone marrow transplants. Skin involvement in aspergillosis may occur as a secondary site of an invasive infection. In contrast, skin can be the only site of infection in primary cutaneous aspergillosis. Up to 11 % of systemic aspergillosis cases may present with secondary skin involvement. Although, invasive aspergillosis is common, primary cutaneous aspergillosis (PCA) is extremely rare.

Purpose: We intend to present a rare case of PCA.

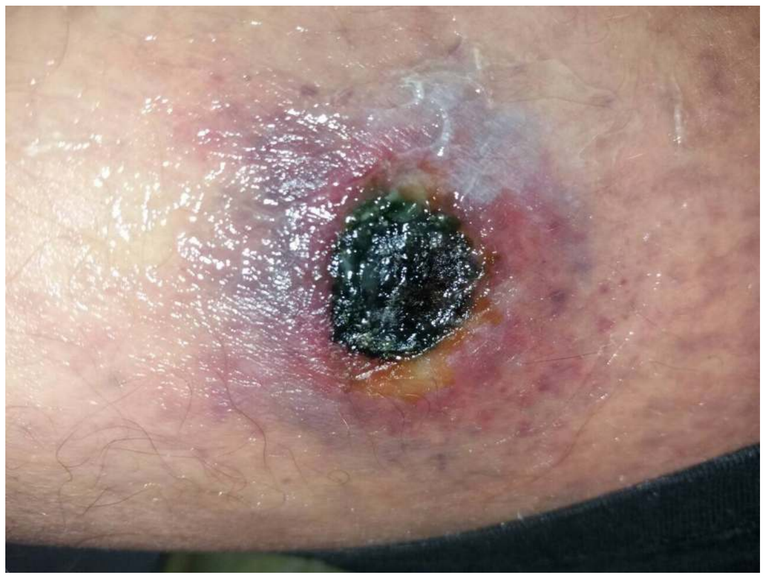

Image 1. Skin lesion before surgical debridement

Materials - Methods: We present a 17-year old boy diagnosed with acute myeloid leukaemia 2 ½ years ago.

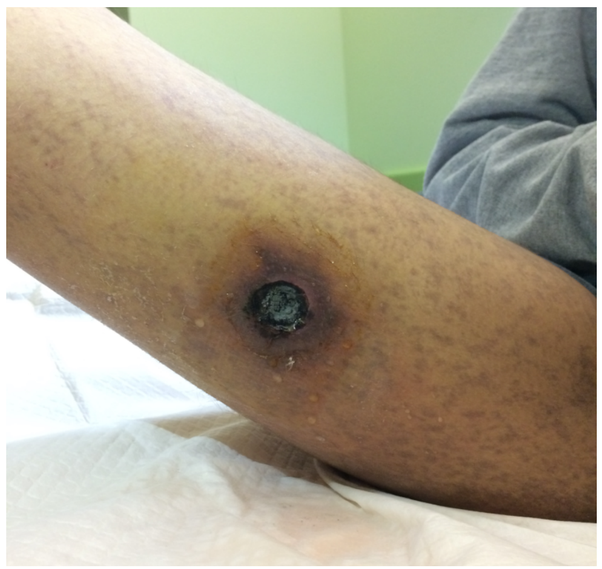

Image 2. Skin lesion after first surgical debridement

He underwent allogeneic bone marrow transplantation (BMT) after his first relapse 1 ½ year ago and by the time of admission he was receiving intensive chemotherapy due to a second relapse. He was also receiving antibiotic therapy with meropenem and teicoplanin due to bacteremia by E.coli. He presented with an erythematous plaque at his right thigh. He remained afebrile. Ultrasound revealed cellulitis. During the first few days, local therapy with mupirocin provided no improvement. A skin biopsy was performed, in order to obtain a culture sample. Soon afterwards, the plaque began to have a blackish center with violaceous areola, which soon transformed into a black center with necrotic characteristics.

Results: Culture revealed infection by aspergillus fumigatus, sensitive to amphotericin B, voriconazole and posaconazole. Due to liver damage (Child – Pugh B) associated with both chemotherapy and BMT, antifungal therapy with posaconazole was initiated. An extensive scan was performed so as to locate other possible sites of infection. Blood cultures, chest X-rays, chest CT scan and abdominal ultrasound were negative for fungal infection. The lesion kept expanding despite treatment, so surgical debridement was performed. Although receding at first, the lesion resumed expansion soon afterwards. Another surgical debridement was performed. The second culture also revealed infection by aspergillus fumigatus, with the same antifungal susceptibility. Treatment was modified to liposomal amphotericin B (5mg/kg) because of poor response to treatment and aggravated liver damage. Another extensive scan revealed no signs of invasive aspergillosis. He resumed treatment with liposomal amphotericin B and underwent two more surgical debridements before being transferred to BMT ward. This course lasted about two months. Soon after receiving the trans-plant, he developed invasive aspergillosis with lung involvement and multiple skin lesions. He passed away approximately one month later due to illness progression.

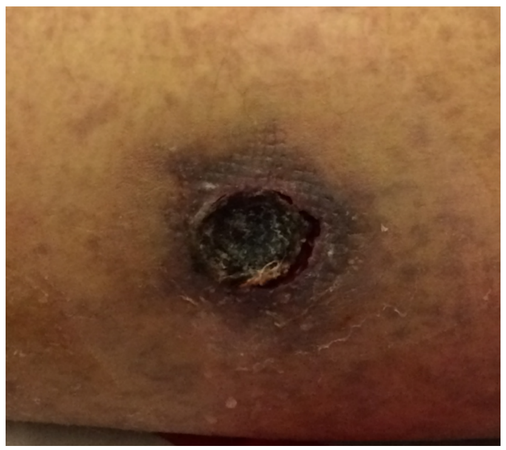

Image 3. Skin lesion after second relapse

Conclusion: PCA is a rare infection, even in immunocompromised patients. However, it is an extremely difficult and time-consuming infection to treat, especially in seriously immunocompromised patients, requiring prolonged antifungal treatment and multiple surgical debridements.