**Objectives**:

While invasive fungal infections are well described in combat injuries and patients with hematological malignancies, *Fusarium* infections in other subgroups remains less well defined, largely due to the heterogeneity in injury patterns and patient characteristics. Moreover, there is a notable paucity of data on Fusarium infections originating from the Middle East. Our objective was to describe the clincial presentation, diagnosis and outcome of Fusarium spp. infection in patients with no underlying hematological malignancy .

**Materials & Methods:**

From January 2014 to January 2024, we reviewed cases of adult patients diagnosed with Fusarium spp. infection at the American University of Beirut Medical Center (AUBMC) and its affiliated hospitals in Lebanon. Diagnosis was based on a combination of clinical features and positive fungal cultures, with histopathological evidence included when available.

**Results**:

A total of six cases were identified, with patient ages ranging from 20 to 60 years. Tow third ( 4 out of 6) cases of *Fusarium* infection were diagnosed based on positive fungal cultures from tissue specimens; one from a urine sample obtained from a urinoma and one from purulent secretion of an infected lower limb stump. Histopathological confirmation was available in only one case, revealing invasive fungal hyphae and a superficial fungal ball.

All patients had a preceding breach in skin integrity, which occurred via traumatic injury or intravenous access. Co-infections with various bacterial species were observed in all cases, and were initially treated solely with antibiotics without clinical improvement. A diagnostic delay of at least three days was reported in each case.

Voriconazole was the primary antifungal agent used, except in one patient in which a combination of liposomal amphotericin B and isavuconazole was administered due co-infection with other fungal organisms (Case 6). Surgical debridement was required in the majority of skin and soft tissues infections, with at least one procedure performed in most patients.

Prolonged hospital stays were observed in patients with severe traumatic injuries. Resolution of the infection was noted in all subjects, with 3 showing adequate uptake of the skin to skin graft, done once negative cultures or healthy non necrotic tissue was noted.

**Conclusions**:

We reported six cases of Fusarium infection in non-hematologic malignancy patients, all of which resulted in positive clinical outcomes. These findings underscore the importance of maintaining a high index of suspicion—particularly in trauma patients—when managing time-sensitive infections. Early recognition, along with timely medical and surgical intervention, is crucial to preventing disease progression and improving patient outcomes.