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Case Report

Cutaneous Myiasis in a Patient with Lymphoma and HIV: Case Report

Ortiz-Valdés Carolina Paola[1*], Izaguirre -Gutiérrez Víctor Francisco[1]

[1]Internal Medicine Department, Bicentenario de la Independencia Regional Specialty Hospital, Institute for Social Security and Services for State Workers, State of Mexico

***Corresponding Author:** Ortiz-Valdés Carolina Paola
Internal Medicine Department, Bicentenario de la Independencia Regional Specialty Hospital, Institute for Social Security and Services for State Workers, State of Mexico

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Abstract: Cutaneous myiasis is an infestation of the skin by fly larvae (diptera), which invade living or necrotic tissue. This condition occurs mainly in tropical and subtropical climates and most commonly affects people with immunosuppression. Therefore, our objective is for the reader to be able to recognize the clinical presentation of myiasis in a patient with immunosuppression who presented inguinal adenomegaly as a key sign of hematological neoplasia.

Keywords: Miasis, Necrosis, Lymphoma HIV, Immunosuppression.

INTRODUCTION

The incidence of myiasis varies, but it is reported in 5.1 to 23 cases per100, 000 inhabitants [1]. It occurs mainly in tropical and subtropical climates. It most commonly affects people with immunosuppression, and fly larvae can colonize areas with tumor necrosis [2].

The relationship between myiasis and HIV is not considered a common association, but it is linked to immunosuppression, and there is no evidence that this disease modifies its pathogenicity. Regarding myiasis and lymphoma, although there is no direct relationship, there is a predisposition in wounds of malignant origin, as in the case of our patient [2].

Fly larvae colonize areas with tumor necrosis. This condition can be confused with bacterial infection or tumor progression. Treatment may include mechanical removal of larvae, debridement, ivermectin, and hypoxia methods to induce larval emergence. All of these therapeutic tools were used with the patient with favorable results [2, 3]. Prevention is key through proper hygiene and protection of exposed lesions [2].

CASE PRESENTATION

We present the case of a 26-year-old male who presented with dermatosis localized to the right groin characterized by an exophytic neoplasm measuring 20 x 25 cm in diameter, amorphous, non-pedunculated, erythematous, with well-defined edges, whose surface consisted of 30% fibrin, 60% necrosis, and 10% eschar, with evidence of 50 larvae measuring 5 mm.

The lesion caused pruritus, pain on movement of the right pelvic limb, with occasional bleeding and limited ambulation. The dermatosis had started 3 months earlier with a papule on the right buttock that later presented erythema, progressed to ulceration, and right inguinal adenomegaly with areas of necrosis (Figure A).

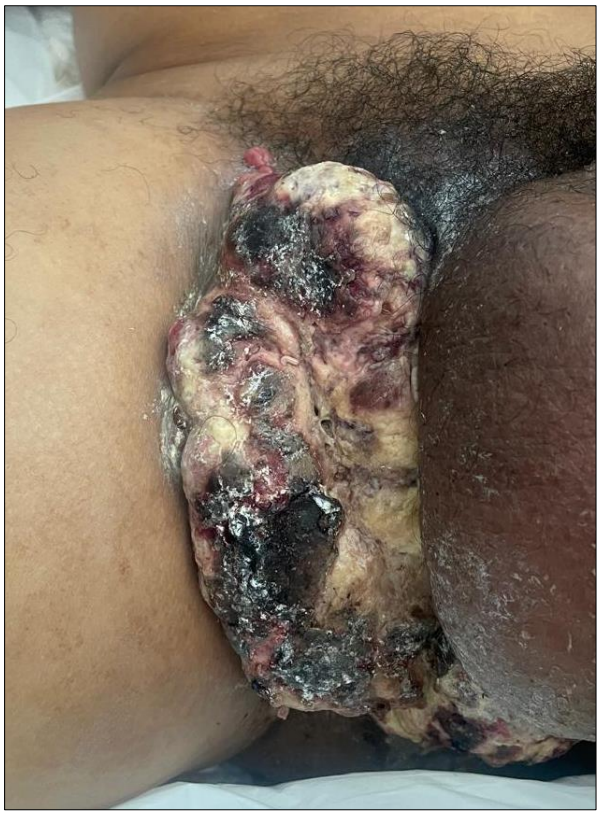

Fig. A: Dermatosis on admission

The patient had a history of HIV diagnosed in 2024 and was being treated with bictegravir, emtricitabine, and tenofovir alafenamide with a viral load of <40 copies.

Due to the history of HIV and adenomegaly, an incisional skin biopsy was performed, reporting tumor necrosis and viable cells consistent with a lymphoid lineage, and a lymph node biopsy reported high-grade B-cell non-Hodgkin lymphoma.

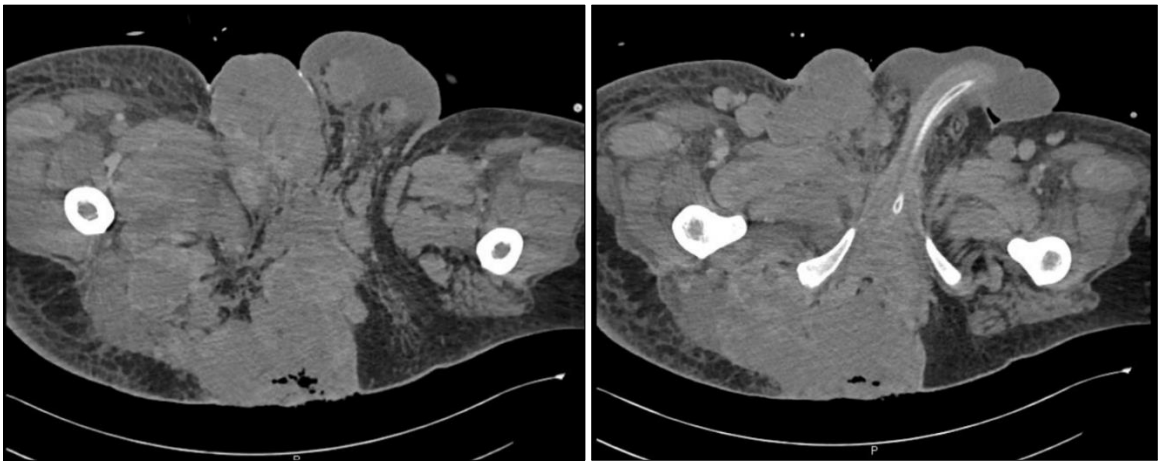

Fig. B: CT scan showed a tumor extending to the ipsilateral inguinal region measuring 151 x 109 x 165 mm, with multiple adenopathies

Initial treatment consisted of vaseline gauze (Fig. C), ivermectin, mechanical extraction, and oncological surgery with surgical debridement in two stages. Once the infection was resolved, chemotherapy with etoposide, cytarabine, and cisplatin was administered.

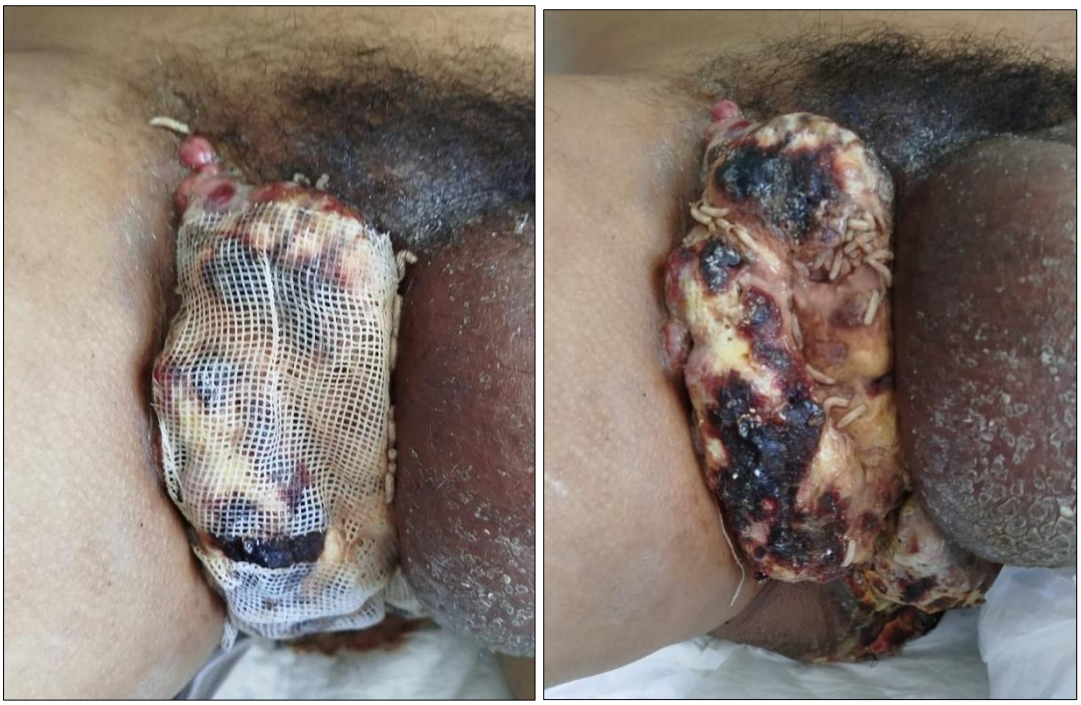

Fig. C: After removal of the vaseline gauze, hypoxia was used to force the larvae out

DISCUSSION

This is a rare condition in HIV, with a predisposition to lymphoma with areas of necrosis, as presented in this case. The types of neoplasms described with the highest incidence of developing myiasis are skin and head and neck tumors, particularly epidermoid carcinomas and basal cell carcinomas, mainly those that undergo ulceration, necrosis, and are exposed to the environment [2-5].

Our patient did not have the most common types of cancer associated with myiasis, but he did have the same characteristics of the lesions, an ulcer that was necrotic and exposed to the environment. The most frequently affected sites include the head, oral cavity, peri-orbital region, and auricles, so the site of onset in our patient is also not considered common [2-5].

The clinical picture of myiasis is characterized by the presence of dipteran larvae in ulcerated or necrotic neoplastic wounds. The symptoms and clinical findings are the visible presence of mobile larvae in the tumor wound, often accompanied by a sensation of movement, itching, and local irritation, with abundant foul-smelling exudate due to tissue decomposition and larval activity. Local pain and, in some cases, bleeding if the larvae invade the vessels [5-7].

Signs of secondary infection may occasionally be present, such as fever, leukocytosis, and positive cultures for bacteria in the blood or wound. In immunocompromised patients or those with comorbidities, myiasis can contribute to more rapid systemic deterioration [8]. Myiasis usually occurs in patients with predisposing factors such as poor hygiene, advanced age, comorbidities (diabetes, vascular disease), and in tropical or subtropical regions [5-9]. In this case, despite the patient's favorable response to HIV infection management, the presence of a hematological neoplasm with this significant continuous onset created a susceptible site for the development of this disease.

The treatment of myiasis in immunocompromised patients should be comprehensive and rapid, given their increased susceptibility to infectious complications and the possible accelerated progression of the infestation. Among the possible treatments, mechanical removal of the larvae is considered the mainstay, avoiding their rupture and the consequent local inflammatory reaction or dissemination of antigenic material [8, 9]. Irrigation and surgical debridement of necrotic tissue are essential to reduce the parasite load and promote healing in cases of infestation [8, 9].

The use of oral ivermectin is considered a supplement, especially in severe, multiple, or hard-to-reach cases. The usual dose is 200 µg/kg in a single dose, although repeated doses may be required depending on clinical evolution and the persistence of larvae [8-10].

The use of petroleum jelly (petrolatum) is a recognized strategy in the treatment of cutaneous myiasis, especially in the furunculoid variant. Topical application of petroleum jelly to the lesion produces local hypoxia, which induces the

larva to migrate to the surface in search of oxygen, thus facilitating its complete manual removal and minimizing the risk of larval fragmentation and secondary inflammatory reaction [10].

In this case, although it did not have furuncular characteristics due to the site affected, it was used because its use depends on the location, the number of larvae, and clinical experience.

In summary, the optimal approach in immunocompromised patients includes: mechanical removal of larvae, debridement, oral ivermectin (and/or topical in selected cases), antibiotics if there is superinfection, and local support and hygiene measures [8, 9].

CONCLUSION

Myiasis in immunocompromised patients is an opportunistic complication. Necrotic lesions should be examined, and symptoms such as pruritus and a "sensation of movement" should be considered indicative of the condition. Prevention is key through proper hygiene and protection of exposed lesions.

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