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Norwegian Scabies in an HIV Patient Infected with Covid-19

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Introduction

Norwegian scabies (crusted) is an opportunistic dermatological disease seen in people with HIV and is likely acquired due to the inability of the immune system to control the mites, thus servetheir overwhelming reproduction [1]. There is a wide range of presentations of Norwegian scabies in people with HIV; ranging from thick, crusty plaques to red papules to psoriasiform plaques and hyperkeratotic yellow papules [1,2]. Norwegian scabies lesions are classically found over limbs extremities, but they are frequently found on the back, face, scalp and around the nail folds [3]. Since Norwegian scabies is extremely contagious, early diagnosis is necessary to allow fast therapeutic management and control of this infection. We report the case of a patient treated in infectious diseases department at the University Hospital Mohamed IV in Marrakesh, Morocco, who presented with Norwegian scabies with lesions distributed over the face, scalp and extremities. In addition to that he was treated for Covid-19 infection.

Observation

Our patient is a 23-year-old man with HIV who was admitted to infectious diseases department at the University Hospital Mohamed IV in Marrakesh with crusty skin lesions all over his body and oral candidiasis. He had a history of skin lesions that initially developed on the scalp and forehead, then spread to limbs extremities after a month. Upon admission, the glabrous skin examination revealed the presence of ; a layer of confluent periocular and temporal erythematous-squamous lesions, few papular retroauricular erythematous plaques covered with thick scaly skin, generalized micro papules with excoriated surface, hard nodules on the anterior part of the right knee and the posterior part of the elbow, as well as erythematous-squamous plaques on the right and left first interphalangeal space with onychomycosis of the second and fourth toes of the right foot and the third and fourth toes of the left foot with thick latero-ungual scaly skin (Figure 1). The patient complained as well of productive cough since one month prior to his admission. His temperature was 36.6 ° C, pulse at 87 beats per minute, respiratory rate at 18 cycles per minute. Cardiovascular, respiratory and abdominal examinations were normal.

Figure 1: Erythematous, papular thick, crusty and extensive lesions, widely seen over the limbs, earlobes and face of the patient.

Biological assessment revealed hemoglobin (Hb) at 8.8 g / dl, platelets at 225,000 / µl, white blood cells at 3050 / µl, and lymphocytes at 370 / µl. CD4 T cell count was 5 cells / µl. ALAT at 37 IU / L, ASAT at 34 IU / L, alkaline phosphatase (ALP) at 275 IU / L and gamma glutamyl transferase (G.G.T.) at 135 IU / L; Blood creatinine at 3.4 mg / l and blood urea at 0.2 g /; LDH level of 486 IU / L; ferritin level at 561 ng / ml. Covid-19 PCR test was negative. Parasitology examination of the sputum was normal.

The chest x-ray revealed bilateral reticular infiltrates, thoracic CT was performed and revealed a bilateral area of ground-glass opacities in a peripheral distribution, some of which are reticulation sites producing the Crazy paving pattern. Foci of condensation at the Fowlers and lower pulmonary lobes, the parenchymal extent estimated at 50%, bilateralmultiple areas of centrilobular nodules with a linear branching patterning a Tree-in-bud sign.

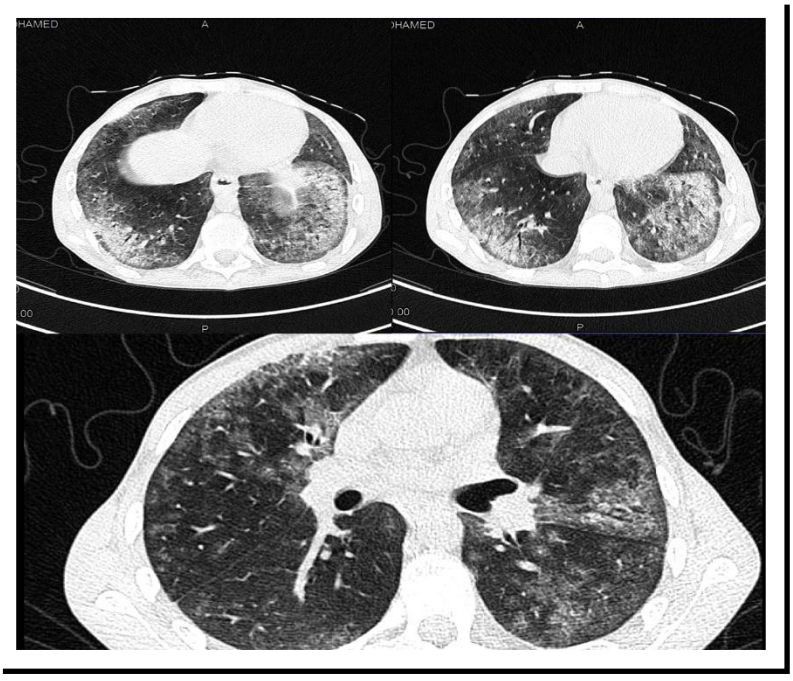

Figure 2: thoracic CT scan showing Ground-glass images.

The differential diagnosis for skin involvement was initially psoriasis. However, a possible infestation with Acarus scabiei was suspected, therefore, skin scabs were collected and revealed A. scabiei mites, which confirmed the diagnosis of Norwegian scabies. The patient was treated with two courses of Ascabiol spaced over 10 days with fusidic acid ointment on the dry lesions and meticulous cleansing of the skin, the outcome was

favorable and the lesions were decreasing after 4 weeks. Based on the chest CT scan, the patient was treated for a probable pneumocystosis by Trimethoprim-Sulfamethoxazole 2 tablets x 3 / d for 21 days than 1 tablet / D. He also received covid- 19national protocol treatment with Plaquinil, Azythromycin, vitamin C and zinc.

Skin lesions started lessen after the first cure and disappeared completely one week after the second cure. In addition to that a disappearance of the cough was obtained.

Figure 3: Lesionsdisappearance after the two cures of Ascabiol.

Discussion

There are a number of predisposing conditions associated with Norwegian scabies [1]. These include diseases that impair T cell function, such as HIV, HTLV-I, T cell lymphoma, leukemia, and moderate immunosuppression used in transplant recipients [4,5]. Systemic lupus erythematosus, rheumatoid arthritis, diabetes, malnutrition, mental retardation, Down's syndrome and various neuropathies have also been associated [2,6]. It has also been reported in patients with immune reconstitution inflammatory syndrome.

However, Norwegian scabies can occur also in patients without obvious immunosuppression [7]. A case series of Dakar Norwegian scabies showed that HIV infection was the most common associated disease, seen in 45% of patients [3,8]. Secondary infections with bacteremia and fatal sepsis have been reported in HIV-infected patients with scabies [1].

Since patients with Norwegian scabies are less itchy, identification of typical scabies affected areas, such as interdigital spaces, is helpful, as is the clinical history.

The confirmed diagnosis is made by a microscopic examination of the skin scrapings, with evidence of mites. Biopsies are not recommended. However, if patients undergo a biopsy for some other reason, mites can also be identified. Since the hyponychium is a protected area, it can serve as a high efficiency site to identify mites. Eosinophilia, which does not occur in patients with scabies, is found in approximately 58% of people with scabies [9].

Norwegian scabies is a serious disease and significantly more contagious than regular scabies. The main way of transmission is skin-to-skin contact. A patient's environment is heavily infected with mites. Patients with crusted scabies are able to trigger an outbreak of scabies [10].

Hospitalization and patient isolation are mandatory to manage scabies due to the high risk of transmission. All persons in contact with the patient should be treated. Fluid and electrolyte balance must be restored the same way as patients with major burns. The use of keratolytic agents such as salicylic acid and urea, or soaking in a hot bath to treat hyperkeratosis can also helpto reduce the mite load and improve the benefits of topical scabicidal agents. The nails should be cut short and brushed with a scabicidal agent [11].

Ointment application of scabicide should be repeated until two Parasitologytests, 3 days apart, become negative. Ivermectin has been used successfully in Norwegianscabies as monotherapy and in combination with other scabicides.[9] we treated our patients with

Ascabiol ointment in two cures, ten days apart, given the unavailability of Ivermectin in Morocco.

Conclusion

Norwegian scabies is a severe form of scabies, it is rarely described during HIV infection and its association with Covid-19 infection is the case reported in our patient, promoted by corticosteroid and immunosuppressive treatments. Its diagnosis is often delayed. Early diagnosis and effective treatment are the only guarantees to eradicate this infestation.

Conflict of interest

We have no conflict of interest to declare.

References

1. Paparizos V, Vasalou V, Velissariou E, Kourkounti S, Daskalakis E, Rigopoulos D. Norwegian scabies presenting as erythroderma in HIV: A case report. Infez Med 2019 3 332. 2019;335.
2. Aukerman W, Curfman K, Urias D, Shayesteh K. Norwegian Scabies management after prolonged disease course: A case report. Int J Surg Case Rep. 2019;61:180-183.
3. Roberts LJ, Huffam SE, Walton SF, Currie BJ. Crusted scabies: clinical and immunological findings in seventy-eight patients and a review of the literature. J Infect. 2005;50(5):375-381.
4. Abdelghani KB, Mahfoudhi M, Trabelsi S, Turki S, Kheder A. GALE NORVÉGIENNE COMPLIQUANT UN LUPUS ÉRYTHÉMATEUX SYSTÉMIQUE NORWEGIAN SCABIES COMPLICATING SYSTEMIC LUPUS ERYTHEMATOSUS.
5. Brites C, Weyll M, Pedroso C, Badaró R. Severe and Norwegian scabies are strongly associated with retroviral (HIV-1/HTLV-1) infection in Bahia, Brazil. Aids. 2002;16(9):1292-1293.
6. Jessurun J, Romo-Garcia J, Lopez-Denis O, Olvera-Rabiela JE. Crusted scabies in a patient with the acquired immunodeficiency syndrome. Virchows Arch A. 1990;416(5):461-463.
7. Maghrabi MM, Lum S, Joba AT, Meier MJ, Holmbeck RJ, Kennedy K. Norwegian crusted scabies: an unusual case presentation. J Foot Ankle Surg. 2014;53(1):62-66.
8. Motswaledi HM. Common dermatological conditions in the HIV patient. South Afr Fam Pract. 2019;61(sup1):S19-S24.
9. Ayoub N, Merhy M, Tomb R. Treatment of Scabies with Albendazole. Dermatology. 2009;218(2):175-175. doi:10.1159/000182254
10. Sandre M, Ralevski F, Rau N. An elderly long-term care resident with crusted scabies. Can J Infect Dis Med Microbiol. 2015;26(1):39-40.
11. Ferreira AA, Esteves A, Mahia Y, Rosmaninho A, Silva A. An Itchy Problem: A Clinical Case of Crusted Scabies. Eur J Case Rep Intern Med. 2017;4(5). doi:10.12890/2017_000591.