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A MULTIDISCIPLINARY APPROACH IN AN IMMUNOCOMPROMISED ADULT PATIENT WITH HERPES ZOSTER OPHTHALMICUS

Infectious Disease

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ABSTRACT

Herpes Zoster infection in adulthood is due to reactivation of Varicella Zoster virus which remains dormant in anterior horn cell of the nerve[1]. Immunocompromised patients are more likely to suffer from reactivation of virus compared to Immunocompetent person[2]. This is a case of 50 Y/o Male Retrovirus positive who presented to the Emergency Department with Vesicular lesion over left fronto-parietal region involving the left eye diagnosed with Herpes Zoster infection. On thorough examination the lesions was infected with Maggots having serosanguinous discharge and hardly any vision spared due to corneal scarring. The patient was treated with Primary care and after discussion with Ophthalmologist and Plastic surgeon, decision of Local Debridement was made. The initial investigations revealed severe immune compromise with CD4 cells counts below 50 cells/microL and Viral Load in millions copies/ml of blood. Multidisciplinary approach requiring multiple surgeries and close observation with regular follow up, the condition of the patient improved drastically over time.Initial treatment with urgent surgical intervention proved to be a big boon for the patient even in severe immunocompromised state. On Follow up after 3 months patients CD4 cells count was above 330 cells/microL and Viral load was completely suppressed. **CATEGORIES:** Internal Medicine, Plastic and Reconstructive Surgery, Ophthalmology.

KEYWORDS

Immunocompromised, Herpes Zoster.

INTRODUCTION

HIV and Herpes co-infection are very common in a patient with very low CD4 count[3]. It has been recently documented that Herpes infection aggravates the transmission and progression of HIV[4]. The reactivation of varicella-zoster virus (VZV) infection may occur during the course of human immunodeficiency virus (HIV) infection as an initial indicator of the disease. Post-herpetic neuralgia and multiple vesiculobullous lesions have been described in HIV-infected patients with herpes zoster. Nonadherence to highly active antiretroviral therapy (HAART) has a significant impact on the patient's quality of life and increases the risk of mortality [5]. Herpes zoster when infects the ophthalmic division of Trigeminal nerve results in Herpes Zoster Ophthalmicus infection which in an immunocompromised patient can lead to drastic consequences [6].

In this case report, the patient condition was followed for 24 months post initiation of highly active antiretroviral therapy (HAART), which led to dramatic improvement in the clinical outcome of the patient and the quality of life.

CASE PRESENTATION

This is a case of 50 Y/o male who was a known case of retroviral disease but not on any medication for many years. He contacted one of the resident doctor in our institute and sent an image of him (Figure 1) suffering from some skin ailment since 1 day. He also mentioned that the skin lesions are itching and there is associated pain over that region. The resident doctor immediately made the diagnosis of Herpes Zoster Ophthalmicus after looking at the image and asked the patient to visit the emergency department for the prescription.

Figure 1 (Initial presentation)

But to our shock patient instead of visiting the emergency department, he preferred visiting some quack who gave him some solution to apply over the skin lesion (Figure 2). The skin infection aggravated and was infested by Maggots in next 24 hours (Figure 3).

Figure 2(presentation in OPD)

Figure 3(wound infected with maggots)

The patient was immediately hospitalised and immediately started on highly active antiretroviral therapy (HAART) consisting of a combination therapy of 3 drugs (TAF, FTC, DTG), after discussion from plastic and reconstructive surgeon team, the decision of local debridement of the wound was made which led to extensive debridement of skin over the involved dermatome. HIV workup of the patient revealed a CD4 cells count of 35cells/microL and viral load of >50millions copies/ml of blood.

Intra-op images showing live maggots over the infected dermatome and after debridement of the wound. The surgeons explained about the gruesome process in dealing with removing every single maggots.

The patient was closely followed up over a period of 24 months. The recovery of the patient post debridement and initiation of HAART was remarkable and is evident from the images.

As evident from the images over a period of 24 months (separate document attached), the patient has almost normal skin and with clear cornea.

DISCUSSION

This case is a very good example of potency of the highly active antiretroviral therapy (HAART) available today with the advancement in HIV treatment. HIV is a pandemic [7] which is still ongoing and possesses a significant threat to healthcare in terms of mortality and morbidity with HIV-1 being the more common variant among HIV-1 and HIV-2 [8]. Globally since the discovery of HIV, it has claimed more than 40 million lives and an approximately similar number of people are living with HIV (PLHIV) [9].

This case reminds of how deadly the opportunistic infection can be in an immunocompromised person and with timely intervention how the infection can be treated and brought under control. Initially the recommendation for starting HAART was different and was based on CD4 cell count, but the new recommendation advices to start HAART irrespective of CD4 cell count [10]. This aims in suppressing the viral load thereby limiting the spread of the virus.

Figure 4 (1month postop)

Figure 5 (3months postop)

Figure 6 (6months post op)

CONCLUSION

Herpes zoster infection in a HIV positive patient with very low CD4 count (<50 cells/microL) can lead to profound disability and quality of life. Timely initiation of appropriate treatment can control the spread of Herpes infection with suppression of HIV virus boosting the immunity of the patient thereby improving overall outcome.

CONSENT

Written informed consent was obtained from the patient for publication of this manuscript and accompanying images.

CONFLICT OF INTEREST

None.

USE OF ARTIFICIAL INTELLIGENCE

No use of any kind of artificial intelligence is made in writing this manuscript.

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