

# Herpes Zoster Presenting As Dental Pain And Facial Palsy

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## ABSTRACT

Herpes zoster characteristically presents as a painful lesion affecting a single dermatome. In unusual circumstances including patients with human immunodeficiency virus (HIV) infection and acquired immunodeficiency syndrome (AIDS), it presents with a multidermatomal pattern. This case report describes an unusual site of occurrence of this disorder presenting initially as dental pain in this patient who was later found to have HIV/AIDS.

## INTRODUCTION

The advent of the HIV/AIDS pandemic has affected the presentation and pattern of several disease entities. Herpes Zoster which presents after an initial episode of Varicella Zoster infection is a well known clinical entity. On the face, it usually affects the ophthalmic branch of the trigeminal nerve.<sup>1,2</sup> However in HIV/AIDS, Herpes Zoster may be multidermatomal, and more associated with post herpetic neuralgia.<sup>3</sup> Ramsey Hunt Syndrome is known to occur when Herpes Zoster affects the seventh

Cranial Nerve - the facial nerve. It may present with vesicles in the ear, facial nerve palsy and Hyperacusis due to the effect on the nerve to the stapedius, a branch of the facial nerve.<sup>4</sup> It is of interest therefore when all of the above present in an unusual distribution, in a single patient. We hereby report this female patient.

## CASE REPORT

We present a 48 year old female trader living in Benin City, Nigeria, who presented initially at the Dental Center of the University of Benin Teaching Hospital (UBTH) and then referred to the Dermatology Clinic of the UBTH with complaints of a rash on the left side of the face of 6 months duration and pain in the affected areas for the same duration. She was in apparent good health until 6 months prior to presentation when she noticed a small raised rash close to her left ear, which spread to involve the mandibular

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KEYWORDS: *Dental pain, facial palsy, multidermatomal herpes zoster, Ramsey Hunt.*

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& maxillary regions of her face. It also affected some of the parietal area of her scalp. It was initially painless but became painful, non-pruritic initially blistering and later healed with scarring. There was associated deviation of the face to the left and hyperacusis. There was no history of weight loss, fever, diarrhea, past Varicella infection. There were no symptoms suggestive of hypertension or diabetes. There was no history of chronic drug use. She had a myomectomy 2 years prior to presentation and received a blood transfusion intra operatively. She is a widow and has had multiple sexual partners after the death of her husband. She has also applied native and herbal remedies. Her past medical, surgical and gynaecological history were not contributory to this illness. She neither smokes nor drinks alcoholic beverages.

Examination revealed an acutely ill looking middle aged woman who was alert and cooperative, not in distress, not cyanosed, afebrile with no peripheral lymphadenopathy.

The left maxillary and mandibular area revealed a severely crusted area with erythema, some exudation and some areas of healing. There was mild extension of the lesion to the areas covered by the 1st cervical dermatome with deviation of the face to the left. The whole of the left ear lobe is also affected. The nervous system examination revealed hypo-aesthesia over the areas affected by rash. The cardiovascular system, chest, abdomen and musculoskeletal system were essentially normal.

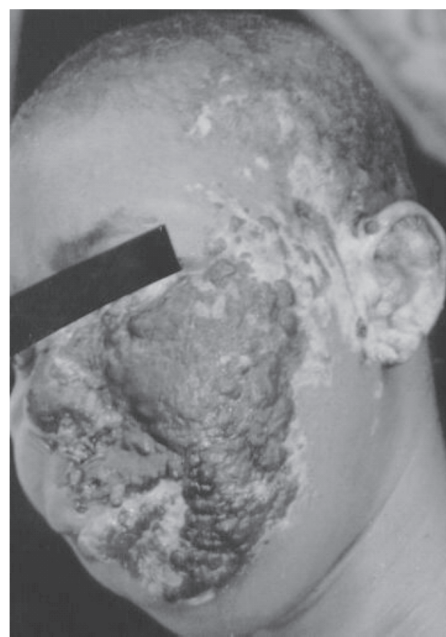
The diagnosis made was multidermatomal Herpes zoster with post herpetic neuralgia with a differential diagnosis of HIV infection with Ramsey Hunt Syndrome and facial Nerve palsy.

Results of investigations done included a HIV screen which was positive, CD4 count which was 200 'cells/w' and haematocrit of 33%. A blood film done showed microcytosis and macrocytosis. Total white blood cell count was 6,000/mm<sup>3</sup>, (neutrophils 42%, lymphocytes 58%) and

Figure 1: Multi-dermatomal Herpes Zoster, Front View



Figure 2: Multi-dermatomal herpes zoster, side view



erythrocyte sedimentation rate of 137 mm/hr (Westergren method). A swab grew *Klebsiella* species and *Staphylococcus aureus* sensitive to common cephalosporins, and ofloxacin group of antibiotics. Blood cultures were negative. Fasting blood sugar was 81mg/dl and the liver function test and electrolytes and urea levels were normal.

The final diagnosis made in this patient based on the CD4 count was HIV/AIDS stage IV with Herpes zoster affecting the maxillary and mandibular branch of the trigeminal nerve (presenting as Dental pain), facial nerve involvement presenting as Ramsey Hunts Syndrome and cervical nerve involvement.

She was commenced on highly active antiretroviral therapy with Stavudine, Lamivudine and Nevirapine. She was also placed on Carbamazepine and Amytryptilene for the Neuralgia and Erythromycin for the secondary bacterial infection. She experienced significant recovery during the following months.

## DISCUSSION

This is a case of special interest, especially in regard to the presentation and the distribution of the lesion. The ophthalmic branch of the trigeminal nerve is almost totally spared. This is usually the commonest branch of the trigeminal nerve to be affected in herpes zoster.<sup>2</sup> In this patient, the maxillary and mandibular branches were severely affected with severe post herpetic neuralgia. The segment (dermatome) supplied by the first cervical nerve (C1) was also affected. (Figures 1&2). This patient presented with herpes zoster involving these three dermatomes at the same time. In addition to these was the involvement of the left facial nerve leading to facial nerve paresis and deviation of the face to the affected side and hyperacusis affecting the left ear.

It is not invariable that all patients presenting with features of herpes zoster will suffer from

post herpetic neuralgia but studies have shown that this complication is more common in HIV/AIDS patients than the general population.<sup>3,5,6</sup>

It was the pain and facial and deviation that prompted this patient to see the dentist. She had not previously been ill and her presenting features were the only pointers to HIV/AIDS, which was confirmed in her. This highlights the observation that herpes zoster may be the only initial presenting disease entity in HIV/AIDS patients.

In the general population the incidence of herpes zoster virus infection is 1.5 to 3 per 1000. It is seen more frequently in patients aged 60 years and older than in individuals 60 years and less.<sup>7</sup> It has been observed in several studies that individuals with HIV/AIDS infection have significantly higher herpes zoster virus infection rates than the general population.<sup>6</sup> The immune deterioration in HIV/AIDS patients with herpes zoster virus may mimic the aging process<sup>9</sup> and may explain the increased incidence of herpes zoster virus infection

Treatment options for Herpes zoster include acyclovir given orally 800 mg five times daily, most effective if started less than 72 hours after onset of symptoms<sup>11</sup>. Intravenous acyclovir is recommended in immunocompromised patients<sup>12</sup>.

Previous studies have shown manifestations of uniquely dramatic and protracted herpes zoster infections compared with those who are not immune compromised.<sup>5</sup> HIV/AIDS patients presented with multidermatomal disease recurrent episodes and more rarely systemic involvement. Notable also is the much younger age of involvement of the HIV/AIDS patients<sup>6</sup> and other reported like ocular involvement, bacterial superinfection, myelitis, meningitis and chronic atypical skin lesions in this group of patients<sup>5</sup>

The possibility of HIV/AIDS in patients who present with unusual patterns of herpes

zoster should be taken into consideration by health care providers.

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