Case report

Herpes Zoster infection in young adult in the Nabdam district of Ghana: a case report

ABSTRACT

The varicella zoster virus belongs to the family of alpha herpes viridae which is responsible for both primary and recurring infections. Herpes zoster is a condition caused by the reactivation of the varicella zoster virus. The reactivation follows a suppressed immune system or aging. Herpes zoster mostly affects the aged population, however, it can also occur at any age. Herpes Zoster is capable of affecting any sensory ganglia and its cutaneous nerve. The infections mostly affect the dermatomes of T3 to L2, however, about 13% of the patients manifest infections relating any of the three branches of the trigeminal nerve. Prodromal symptoms may include malaise, neuropathic pain, headache and interrupted sleep. Herpes zoster causes pruritic, confined, blisters which usually occur unilaterally in the distribution of either one or more adjacent sensory nerves that comes along with neuropathic pain in the affected dermatome. This case of herpes zoster is reported on a 32-years-old man who was managed based on the symptoms he presented.

1. INTRODUCTION

Herpes zoster (HZ), also called shingles, is caused by varicella zoster virus and is usually presented by painful, blistering dermatomal rash [1,2]. It is a neurodermotropic virus which remains quiescent in the sensory ganglion and upon reactivation, it causes herpes zoster. Reactivation of the virus may occur when the immune system of the host is incompetent [3].

Herpes zoster usually erupts in one or two adjacent dermatomes; 50-60% being thoracic, 10-20% being cervical and trigeminal (10-20%) being most commonly affected areas. Meanwhile, the lumbar (5-10%) and the sacral (5%) are far less commonly affected dermatomes. In patients

with competent immune system, the involvement of non-contiguous dermatomes is never observed, however, intersecting of adjacent dermatomes can be observed in 20% of the cases. The estimated lifetime risk of HZ in the general population is between 10-30%, with the risk increasing sharply in people over 50 years of age.[4] The incidence of HZ in immunocompetent individuals is 1.4 per 1000 years in people below 40 years, 4.2 per 1000 years in people up to 50 years and 10.5 per 1000 years for people above years old.[5] This case is being reported to highlight the rarity of the incidence of HZ in individuals less than 40 years.

2. PRESENTATION OF CASE

A 32-year-old man reported to the outpatient department with fever, pain and blisters on the right thoracic, right upper arm, dorsum and neck for 6 days. He developed the vesicular eruptions 3 days after the fever, followed by itching, which subsided after 2 days. The patient also complained of severe and continuous pain which radiates to the neck and head. There was no history of physical or mental stress, trauma, ill health, radiotherapy. However, there was a history of exposer to herpes zoster viral infection about ten years ago.

Examination showed ruptured vesicles which merged to form large, dried ulcers that differed in sizes from 1-2cm in diameter on the thoracic, upper arm, neck and dorsum (figure 1). The ulcers were irregular in sharp and covered with pseudomembranous sloughs at the base. The ulcers were tender on palpation. No vesicles were on the floor of the tongue or palate during intraoral examination. Based on the clinical manifestation, a diagnosis of herpes zoster was given and patient immediately started antiviral medications and pain relievers.

A prescription of acyclovir tablets 600mg every 6 hours a day for one week was given to patient to control the active viral phase. Diclofenac tablets 50mg thrice daily for 3 days was also prescribed as a pain reliever and to suppress the inflammation. Vitamin C supplement was given to promote healing of ulcers and topical application of acyclovir cream (5%) was also prescribed to help soothed the ulcers. The patient was reviewed every week for four weeks. By the fourth week, all lesions were healed and no new ones formed (figure 2).

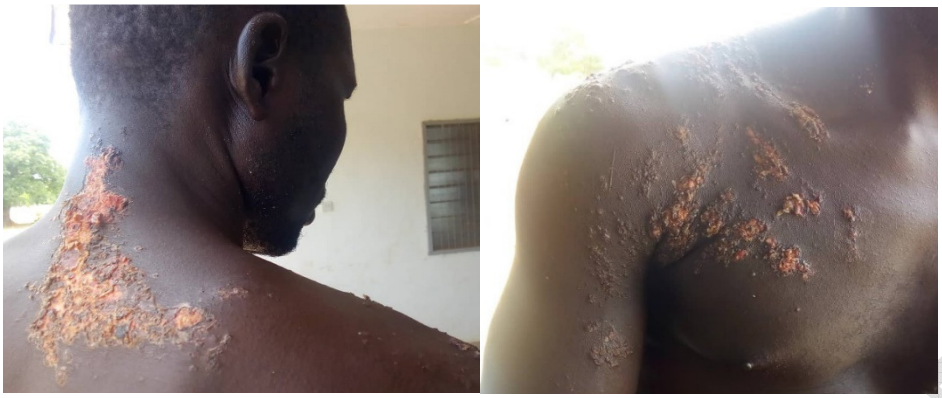

Figure 1: Dried ulcers on the dorsum, neck, thoracic and upper arm

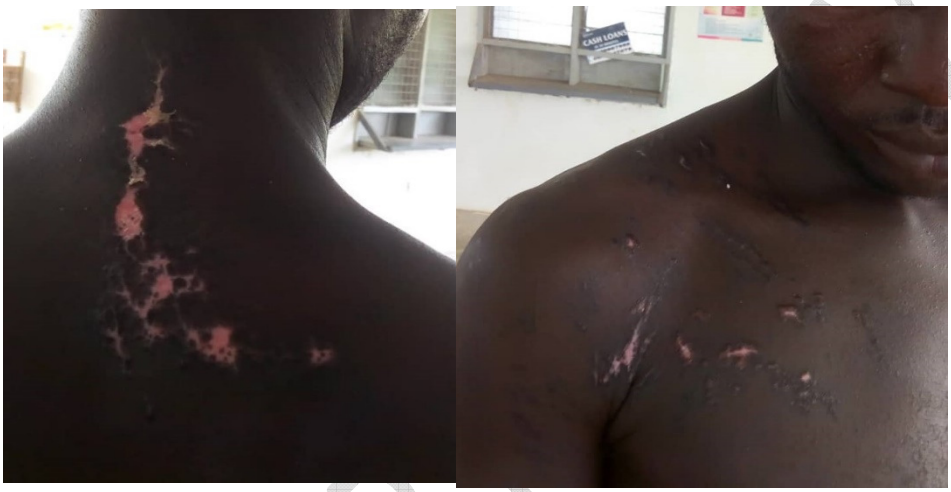

Figure 2: Ulcers completely healed by the fourth week

3. DISCUSSION

Varicella zoster virus is an alpha herpes virus which causes primary infection called chicken pox and then becomes dormant, usually in the dorsal root ganglia or ganglia of the cranial nerves. On reactivation, it produces herpes zoster infection, known as shingles. [6] The virus enters its host through the respiratory canals and begin to replicates at an undefined site (probably the nasopharynx). The virus then infiltrates the reticuloendothelial system where it eventually finds its way into the bloodstream.[7]

Herpes zoster infection (shingles) mostly occur in adults and starts with a prodromal of deep, achy and burning pain. It is usually accompanied with slight to no fever and crops of vesicles

begin to appear within 2-4 days in a dermatomal pattern.[6] The lesions then begin to dry up 3-5 days after appearing. The duration of the disease is generally between seven and ten days, although complete healing may last up to four weeks or more.[8]

Postherpetic neuralgia (PHN) is considered the most common complication associated with herpes. This is a condition where the pain persist for a number of months and even sometimes years after the rash has been resolved.[9,10] About 20% of elderly patients reports with PHN after acute phase of herpes zoster infection. [11] The pain can be described as a brief recurring and shooting, with a constant, typically deep pain and it is a major cause of morbidity. Other possible complications of HZ may include myelitis, peripheral nerve palsies, encephalitis and forms of contralateral hemiparesis. A rare complication of herpes zoster involving geniculate ganglion is termed Ramsay Hunt syndrome. It is characterized by the development of Bell's palsy, blisters of the auris externa as well as loss of taste in the two-third anterior of the tongue.[8] There was no complication in this case report.

Acyclovir is the first medication of choice for the management of HZ. It is prescribed as tablets acyclovir 800mg six hourly a day for 7-10 days. Famciclovir is a newer form of antiviral drug developed to specifically tackle the acute of phase of herpes zoster infection. It is administered in dosage of 500mg thrice daily for 7 days. Topical acyclovir cream (5%) treatment is applied as topically four times daily for one week. Vitamin C is also given as 200mg thrice a day for 3 days.[12]

Oral corticosteroids have frequently been used for pain management in herpes zoster, however, clinical trials have generated inconsistent outcomes for decreasing development of PHN. In a study using the combination of prednisone and acyclovir indicated a significant decrease in pain associated with herpes zoster. Narcotics use may be indicated in patients suffering severe pain. Nerve block medications is also used as a pain management option in the standard medical model. Anesthetic agents may also be injected locally in the affected nerves and this could provide pain relief that lasts for 12-24 hours. [7]

4. CONCLUSION

It has been established that patients with HZ are contagious until the lesions have been healed. Therefore, prompt diagnosis and management of the infection in the prodromal phase by using the right antiviral medications should be the main aim of its management. Clinicians should therefore be equipped with thorough knowledge about manifestation of the disease, its treatment as well as its possible complications. Differential diagnosis is also very crucial to ensure that the right treatment is provided.

COMPETING INTEREST

There is no competing interest.

PATIENT CONSENT

A written informed consent was obtained from the patient for publication of this case report and accompanying his images.

ETHICAL APPROVAL

An approval was sought from Ghana Health Service through the Nabdam District Health Directorate.

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