

# SIMULTANEOUS OCCURRENCE OF HERPES ZOSTER AND VARICELLA IN A PATIENT OF TUBERCULOUS LYMPHADENITIS

(A case report)

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## Summary

A rare case of concurrent herpes zoster and varicella probably precipitated by tuberculous lymphadenitis has been reported and relevant literature is reviewed.

Bokay<sup>1</sup> was the first, three quarters of a century ago, to claim purely on clinical grounds that varicella and herpes zoster were caused apparently by the same agent. Since then, this view has been supported by many authors.<sup>2 3 4</sup> Both the diseases present with very different clinical manifestations and age distribution. However, the causative agents of the two syndromes have been shown to be indistinguishable morphologically, antigenically and biologically.<sup>5 6 7</sup>

Varicella has a seasonal peak, usually in the spring; most patients give a history of contact with another infectious patient; it is usual response to primary infection and is seen generally in children. Herpes zoster, in contrast, is independent of any seasonal influence and it is an endemic infection; many patients have not known exposure to either of these infections; but it is the manifestation of a recrudescent infection with residual antibody persisting from previous varicella and occurs

commonly in adults. There have been many reports of the increased severity of varicella and herpes zoster infection in persons without exposure following steroid therapy,<sup>8 9 10 11 12 13 14</sup> X-irradiation,<sup>14 15</sup> in the presence of lymphoproliferative diseases,<sup>4 13 14 16</sup> spinal tumor,<sup>13</sup> malignant process,<sup>13 14</sup> arsenic poisoning or therapy<sup>12 13 19</sup>, or in patients in whom immunologic factors of resistance were subnormal because of generalized illness.<sup>14 20</sup> Almeyda has reported associated miliary tuberculosis in one of his 3 cases of varicella and herpes zoster.

Simultaneous occurrence of herpes zoster and varicella in same patient is uncommon. The review of literature shows very few reports upto now. We had one patient having varicella and herpes zoster simultaneously. He had tuberculous lymphadenopathy and cold abscess in association. Because of the rarity of this association, we have been prompted to report about this patient.

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## Case Report

A 29-year-old Hindu male was admitted to the Irwin Group of Hospitals, Jamnagar, on 23rd November 1971, for

a severe attack of herpes zoster involving the sensory distribution of the ophthalmic branch of the left trigeminal nerve. The attack was preceded for three days by malaise, intermittent moderate fever and an acute neuritic pain on the left side of the scalp, eye and some part of the nose. He was taking antituberculous drugs (Injection streptomycin and tablet isonex) for tuberculous cervical lymphadenopathy since last one month. He did not remember having had any disease in childhood and had no recent known contacts with varicella or zoster.

On examination, patient looked ill. He had 101°F. temperature; pulse rate was 104/min. and blood pressure was 110/80 mm of Hg. Vasiculobullous skin eruptions involving the ophthalmic branch of left trigeminal nerve were present (Fig. 1) Several vesicles over the nose were haemorrhagic. Marked swelling of left eye lids and conjunctival chemosis were observed and it was difficult to open the left eye. Bilateral



Fig. 1

Showing Herpes Zoster involving the first branch of left trigeminal nerve

cervical lymph glands were palpable. Respiratory, cardiovascular, alimentary and central nervous systems were clinically normal.

He was treated with oral analgesics, antihistaminics and local application of lotio calamine over the herpetic eruptions; tetracycline ophthalmic ointment was applied in the eyes. Antituberculous drugs were continued.

Two days later, while he was still febrile, he developed generalized scattered macular eruptions turned into papules and vesicles all over, giving the appearance of 'true' varicella. (Fig 2) The lesions were noticed in all their stages, mainly, papules, vesicles, pustules and crusts. The temperature settled down after six days of admission. The varicelliform rash had cleared in 12 days, whereas, herpetic lesions had not completely disappeared and took further three weeks to clear. He developed cold abscess in the cervical region on the 12th day of admission; thick pus was aspirated from that.



Fig. 2

Showing rashes of varicella in the back and tuberculous cold abscess on the right side of the neck

Total leukocyte count was 8,200/cmm with polymorphs 60%, lymphocytes 35%, eosinophils 4% and monocytes 1%. ESR was 54mm. at the end of 1st hour (Westergreen Method). Hb. was 10.4g%. Peripheral smear showed microcytic hypochromic anaemia. Urine analysis was normal. X-ray chest and fundus examination were normal. Aspirated pus from cold abscess was sterile. Serological tests for syphilis were negative. Culture for VZ viruses, fluorescent antibody or neutralization tests could not be carried out because of lack of facilities.

Recovery was uneventful and he was discharged with the advice to continue anti koch's treatment.

### Discussion

Though the etiological agent of herpes zoster and varicella is one and the same, simultaneous occurrence of herpes zoster and varicella is very rare. Ferriman<sup>21</sup>, Campbell<sup>22</sup> and Almeyda<sup>2</sup> have reported such cases. Varicelliform eruption followed unilateral herpetic attacks within the five-day interval in all the three cases of Almeyda<sup>2</sup>. In our case also varicelliform eruption followed unilateral herpetic lesion on the fifth day.

As mentioned previously attack of herpes zoster can be precipitated by various factors such as, spinal tumor, neoplasms, leukemia, X-irradiation, steroid therapy, syphilis, arsenic or lead<sup>13</sup> or any generalized illness which alters immunological responses<sup>14, 20</sup>. Miliary tuberculosis was associated with herpes zoster and varicella in one of the three cases of Almeyda<sup>2</sup>. In addition to herpes zoster and varicella, our patient had tuberculous cervical lymphadenitis with cold abscess formation. We presumed that tuberculosis which leads to alteration in immunologic response resulting in diminution of cellular resistance or defective pro-

duction of the antibodies, might be the ultimate cause for the appearance of herpes zoster and varicella.

The virus of herpes zoster and varicella is same, but possibly assumes a dual role, a neurogenic role when it is confined to the posterior root ganglia, its fibres, its peripheral nerves, the perivascular spaces, the cerebrospinal fluid, and a haematogenous role when it finds its way into the general bloodstream. It explains the three clinical manifestations of this virus infection, namely, herpes zoster, varicella and the joint diseases. Soon after the initial attack of varicella, most of the sensory ganglia in the body for the rest of their lives begin harbouring a harmless component of varicella such as provirus fifty or more foci in incomplete virus in a latent form. It may revert to normal infectiousness in favourable conditions some of which have already been mentioned previously. The frequency of varicella outbreaks originating from herpes zoster can be explained by the facts that the neurotrophic variant can more easily, if given the right host, alter its nidus and become a haemotrophic one. The neurotrophic virus takes time to force a break-through from the perivascular spaces into the bloodstream, to assume the role of a haemotrophic virus.

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TRUE or FALSE?

Ultrastructural change of thickening of BM of cutaneous vessels is not a significant finding in Diabetes Mellitus and cannot be considered a cutaneous marker of Diabetes Mellitus.

(Answer page No. 257)