

Case Report

Hemorrhagic chickenpox

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Received: 07 April 2020

Revised: 08 May 2020

Accepted: 13 May 2020

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ABSTRACT

Chickenpox (varicella) is self-limited disease caused by Varicella-Zoster virus (VZV). Hemorrhagic manifestation is rare complication in immunocompromised patient. Here we report a case of rare form of hemorrhagic chickenpox due to chronic alcohol intake. The course of illness was very fulminant and rapid.

Keywords: Hemorrhagic chickenpox, Hemorrhagic varicella, Bleeding chickenpox, Fulminant chickenpox, Coagulopathy

INTRODUCTION

Chickenpox (varicella) is self-limited disease caused by Varicella-Zoster virus (VZV), which is a common and extremely contagious acute infection that occurs in epidemics among preschool and school-aged children, and is characterized by generalized vesicular rash.¹

The typical clinical presentations of varicella are distinctive and readily recognized by most experienced clinicians. However, atypical clinical presentations and uncommon complications of this disease can pose diagnostic and therapeutic challenges.

Once the infection occurs it induces IgM, IgG and IgA antibodies within two to five days after the appearance of rash.

Cell-mediated immunity is more important, and when impaired, there are more chances of complications such as hepatitis, encephalitis, pneumonitis, thrombocytopenia and bullous/hemorrhagic chickenpox, and the mortality of bullous/hemorrhagic chickenpox ranges between 7-10%.²

Hemorrhagic varicella is a serious complication and

usually occurs in immunocompromised persons and those on immunosuppressive therapy. Nevertheless, it is the adult patient, along with the immuno compromised patient of any age who will suffer the highest mortality. Males (both boys and men) have higher risk for a severe infection.³⁻⁵

We present a case of chronic alcohol consumer who develop a rapid fulminant illness with severe bleeding leading to fatal outcome.

CASE REPORT

A 37 years old male reported at military hospital in central india with history of skin rashes of one day duration. He developed fluid filled lesions first on back then over chest and abdomen followed by similar lesions on limbs.

Patient had history of significant alcohol intake for fifteen years. On examination, the patient was afebrile, vital were normal, there was no significant lymphadenopathy and per abdomen organomegaly. Dermatological examination revealed multiple pleomorphic vesicular lesions on erythematous base predominantly on chest and abdomen.



Figure 1: Multiple crusted hemorrhagic lesions.

Investigations revealed as Hb-14.1g/dl, WBC-8200/dl, differential leukocyte count- P60, L32, M04, E04. Platelets-190000/dl. BSR 96 mg/dl, S. urea/creatinine was 27/0.8, chest X-rays PA view was within normal limits. LFT was deranged with S bile 0.8mg/dl, SGOT 166 IU/dl, SGPT 320 IU/dl. Urine examination was normal. Dengue serology and other viral markers including HIV were negative. USG abdomen revealed grade 2 fatty liver.

On the basis of clinical presentation and basic investigations, a diagnosis of chicken pox and non-icteric acute viral hepatitis was made, and patient was started on tablet acyclovir 800mg five times a day, antibiotics, and supportive therapy.

On second day of hospitalization vesicular lesions increased in size to form bullae and by evening patient was found to have bleed from venepuncture sites and bulla become hemorrhagic.

Repeat investigations revealed normal platelet count with deranged PT/INR (2.25). The patient was administered fresh frozen plasma, intravenous acyclovir and broad-spectrum antibiotic but patient succumbed within twelve hours despite best supportive and intensive care due to sudden aspiration secondary to massive hematemesis. The clinical course in our case was very fulminant the patient succumbed within 48 hours of rash onset.

DISCUSSION

On an average, about 60 million cases of varicella occur worldwide each year, and the incidence in india is about 4.7 lakhs annually. Varicella usually takes a benign course and the complications are usually mild. In immunocompromised individual, it may be complicated.⁶ Such persons are at risks of developing VZV infection of internal organs leading to pneumonitis, hepatitis, encephalitis, DIC and hemorrhagic chickenpox.⁷

The course of illness in this patient was very fulminant and rapid. Unfortunately, we were not able to confirm illness with laboratory tests because of his rapid demise.

The disease has high mortality rate and death usually occurs within forty-eight hours of the disease onset. Initial forty-eight to seventy-two hours is crucial as body take this much of time to induce immunity after onset of rash and most of deaths from hemorrhagic/complicated chickenpox occur during this period.

This type of presentation also can be confused with DIC. However, DIC is more common with bacterial infection and associated with thrombocytopenia and septic shock. Thrombocytopenia is seen in as many as 98% of DIC patient and platelet count dip below 50 thousands/dl in 50%. A trend toward decreasing platelet counts or a grossly reduced absolute platelet counts is a sensitive indicator of DIC in our case patient platelet count remained around 2 lakh/dl.⁸

In our case chronic alcohol intake in significant amount might have led to impaired cellular and humoral immunity and this may be the probable reason for hemorrhagic varicella.

The etiology of hemorrhagic chickenpox is not known, although an autoimmune pathophysiologic mechanism has been implicated.^{9,10} It has also been observed that the patient with hemorrhagic chicken pox have reduced level of coagulation factor II, V and VIII.¹¹

Immunocompromised person with chickenpox should be hospitalized and extra attention should be given to detect early stage of complication. Immunocompromised patient should be advised to avoid contact with chicken pox. If exposure occur, intravenous immunoglobulin and acyclovir should be administered at earliest.

CONCLUSION

Our encounter with this case highlights that un-icteric acute viral hepatitis, hemorrhagic and bullous varicella can also present in chronic alcoholic and can lead to rapid deterioration in clinical condition and even death. So, emphasis should be given to primary prevention as mortality is very high even with best available treatment started at earliest.

Funding: No funding sources

Conflict of interest: None declared

Ethical approval: Not required

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Cite this article as: Suman S. Hemorrhagic chickenpox. *Int J Res Dermatol* 2020;6:573-5.