Annals of Clinical Case Reports

Case Summary
Published: 03 Nov, 2022

Brivudine in the Management of Generalized Kaposi's Varicelliform Eruption (KVE): A Case Report

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History and Physical Examination

The patient was a 19-year-old male. He complained of generalized blisters for 10 days, without pain, itch or fever and lumbosacral pain for 5 days. He reported a history of facial acne for 2 years and IgA nephropathy for a month. Skin Conditions: Cutaneous blisters filled with clear fluid and ranging from the size of a green bean to corn kernel were extensively found on his head, face, body, and limbs, partly with the appearance of hilar depression.

MRI

No abnormality was demonstrated in the lumbosacral area.

Laboratory tests

Negative for *Cytomegalovirus* (CMV), Epstein-Barr Virus (EBV), and Herpes Simplex Virus (HSV) DNAs; negative for Desmoglein 1 (Dsg1), Desmoglein 3 (Dsg3), and Bullous Pemphigoid Antibody 180 (BP180); Renal Function (Figure 1).

Pathology

Lesions with basket-woven cornification, multilocular blisters in the epidermis, partial degeneration and necrosis of epidermal blister roofs, formation of a Malpighian layer in the blisters, ballooning degeneration of prickle cells in the blisters, nuclear hypochromatism and chromatin margination, blood vessel dilatation and thrombosis in the superficial dermis under the blisters, with mononuclear cells sparsely distributed around the vessels and presence of neutrophils and extravascular erythrocytes. Indirect immunofluorescence suggested no aggregation of IgA, IgG, IgM, C3, and C4 in the epidermis, basement membrane zone or dermis.

Diagnosis

1. Kaposi's Varicelliform Eruption (KVE); 2. IgA nephropathy; 3. Acne.

Treatment

Brivudine was administered at a dose of 125 mg/d; at D8, the blisters all over the body began to shrink, and the backache disappeared quickly; two weeks later, the blisters all over the body got harder and harder, eventually leaving thick flaky scars.

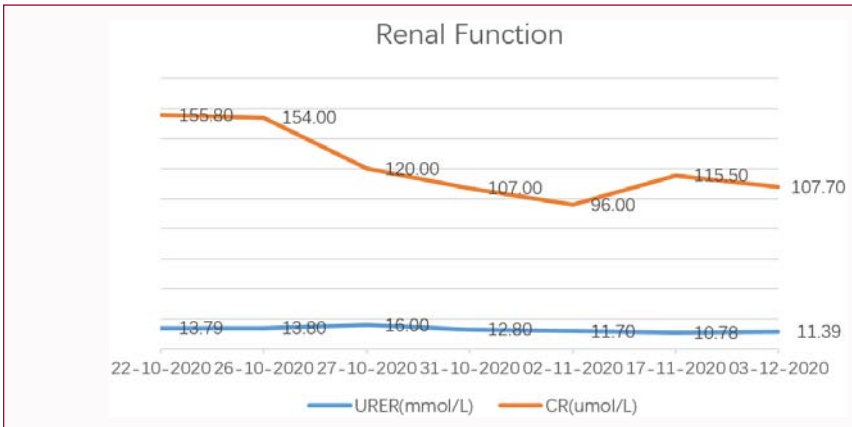

Figure 1: Renal function.

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Received Date: *12 Oct 2022*
Accepted Date: *28 Oct 2022*
Published Date: *03 Nov 2022*

Citation:
Ma YH, Wang DH, Yang Y, Ma XX, Guo BS. Brivudine in the Management of Generalized Kaposi's Varicelliform Eruption (KVE): A Case Report. Ann Clin Case Rep. 2022; 7: 2337.
ISSN: 2474-1655.

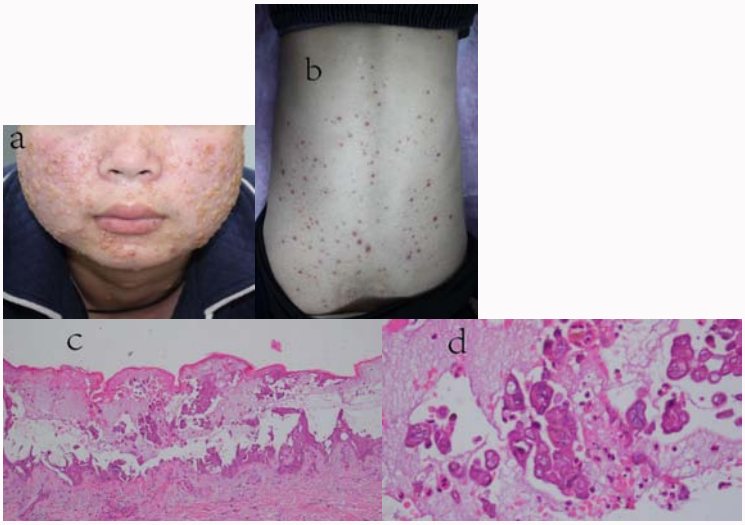

Figure 2: Skin lesions face (a), bank (b), Pathology 100x (c), 400x (d).

Discussion

The young, male patient had a history of acne and IgA nephropathy and suffered from an acute onset of generalized KVE, without pain, itch or fever but backache. Impression: Kaposi's Varicelliform Eruption (KVE). Bullous dermatosis should be ruled out before a definitive diagnosis was made (in this case, bullous dermatosis was ruled out based on pathological evidence and antibody test results). Considering his impaired renal function, the patient was first administered with 125 mg of oral brivudine tablets once daily. The ideal therapeutic effect was achieved, without seriously compromising the liver or kidney function. KVE is a sudden vesicular rash with the appearance of hilar depression, which is primarily caused by HSV-1 that infects a preexisting atopic dermatitis or cutaneous rash. KVE can also result from the smallpox virus, cowpox virus, and coxsackie virus. Generalized KVE is a disseminated cutaneous infection by the pathogenic virus entering the blood circulatory system [1]. Brivudine is an antiviral nucleoside drug that reacts with viral RNA polymerases to inhibit viral replication. Therefore, brivudine can effectively suppress the replication of the Varicella-Zoster Virus (VZV). *In vitro* trials show that brivudine, as a virostatic agent, is 200 to 1000 times more active than acyclovir and penciclovir. Animal experiments suggest that brivudine has an inhibitory effect on Macacine herpesvirus and (mouse, guinea pig) Herpes Simplex Virus 1 (HSV1). Dose adjustment is unnecessary for elderly patients and those with moderate to severe renal dysfunction or liver dysfunction. This case report suggests that brivudine is suitable for KVE patients with renal inadequacy without making any dose adjustments. In this case report, the patient suffered from backache following the onset of KVE, with the MRI findings suggesting no abnormality in the lumbosacral area and the symptom subsiding subsequent to the use of brivudine. This indicates an association between backache and viral infection.

Conclusion

Brivudine can be applied to the treatment of KVE and demonstrates robust efficacy and safety outcomes in patients with generalized KVE, which requires no dose adjustment in those with renal function impairment.

References

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