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**Title:** Severe Herpes Zoster Ophthalmicus in an Immunocompromised Patients

**Running Head:** Herpes Zoster Ophthalmicus

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A 65-year-old male presented with pain and redness on the right of his face for a few days ago. On medical history, he underwent bone marrow transplantation from full match donor, due to AML-M5 3 years ago. He was followed in remission for two years. On physical examination, the findings were as follows: temperature was 36.7°C, blood pressure was 110/70 mmHg, pulse rate was 84/min. Erythema and vesicles were observed on the right frontal area and scalp limited with dermatome of trigeminal nerve ophthalmic branch (V1) (Figure A). Respiratory and abdominal examinations were normal. The results of laboratory analysis were as follows: neutrophil cell count was 3360/mm<sup>3</sup>, hemoglobin was 14 mg/dL, creatinine was 1.0 mg/dL and liver enzymes were normal. Atypical cells were not observed in peripheral blood smear. In the cranial computer tomography, bilateral orbital cavity was normal but an infiltration was observed starting from the right frontal region including periorbital and zygomatic region. The initial therapy was acyclovir 10 mg/kg given in three times in a day and 4 mg/kg daptomycin. The ophthalmologic examination showed that there are herpetic lesions on the cornea, topical ganciclovir application was also added to the initial therapy. The vesicular lesions were improved on the 14th day of acyclovir treatment (Figure B). After one-week cessation of antimicrobial therapy, patient presented with severe pain in the lesion area. He was diagnosed with postherpetic neuralgia and antidepressant treatment (duloxetine) was initiated.

Viral infections can be severe and life threatening in the course of Hematopoietic Stem Cell Transplantation (HSCT) due to T-cell depression. Varicella zoster virus infection may occur a localized or disseminated infection in HSCT patients (1). Herpes zoster ophthalmicus (HZO) is caused by reactivation of the varicella zoster virus in the ophthalmic branch of the trigeminal nerve. The most common complication of HZO is postherpetic neuralgia (PHN). PHN is severe pain in the lesion area that occurs within 90 days after the rash. In the treatment of PHN, antiviral therapy and gabapentin, tricyclic antidepressants or SSRI are recommended. Besides, ocular involvement may occur in patients with HZO, such as blepharitis, keratoconjunctivitis, iritis, scleritis, and acute retinal necrosis. The differential diagnosis of HZO includes cellulitis, mucor (in immunocompromised patients), other viral inflammation caused by mumps or syphilis. The image of HZO was presented in here. Early diagnosis of HZO in immunosuppressed patients and early initiation of treatment are effective in preventing serious complications.

The patient was informed verbally and the written consent was taken.

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Patient's consent was obtained to publish the image.

**Figure A**

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**Figure B**

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