Tuberculous Meningoencephalitis and Cerebral Toxoplasmosis in HIV Patient with Stevens Johnson Syndrome: a case report

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**Background**
Neurological deficits may appear as the first manifestation of AIDS in 10-20% of symptomatic HIV infection. Common central nervous system (CNS) infections in HIV patient in Asia and Pacific regions are cerebral toxoplasmosis, CNS toxoplasmosis, and cryptococcal meningitis. In 15% of cases, the aetiology may be due to several agents, making this more difficult to treat, and leading to more complication, including increased risk of Stevens Johnson syndrome (SJS).

**Case Report**
- **Clinical Findings**
  - 35 years old male
  - Gradual loss of consciousness, subacute cephalgia, subacute sublebris, nuchal rigidity and focal neurological deficit
  - Multiple sexual partners as risk factor for HIV infection
- **Blood Examinations**
  - CD4+ 114 cells/μL, toxoplasma IgG > 650 IU/mL, toxoplasma IgM negative
- **Head CT Scanning**
  - Multiple hypodense lesions with ring enhancement and surrounded by edema
- **Cerebrospinal Fluid Examination**
  - Leucocyte 60 cells/μL with lymphocyte predominance (100%), increase protein level, decrease glucose level

**Picture of the patient**
Lips were covered by thick black crust, his eyes could not be opened because of purulent discharges, ill-defined mucus with irregular shapes, some of them confluentes into erythematous vesicles all over his body

**CT scans of the patient**
A: on admission, without (1) and with contrast (2), B: evaluation after 2 months, without contrast. CT scan evaluation showed more lesion

Patient was diagnosed as HIV infection with tuberculous meningoencephalitis and cerebral toxoplasmosis co-infections
- He received rifampicin -isoniazid- pyrazinamide - streptomycin regimen for tuberculous meningoencephalitis and pyrimethamine - clindamycin regimen for cerebral toxoplasmosis
- Patients showed a good response at the beginning of therapy, but in the 3rd week of treatment, patients suffered Stevens Johnson syndrome and allergic to all drugs given. Patient died due to sepsis

**Discussion**
Immunocompromised state associated with HIV infection increases susceptibility to various CNS infections, especially when CD4-cell count is less than 200 cells per μL, with multiple infections are present in 15% of cases.

In the case of multiple CNS infections, clinician must give multiple medication regimen, leading to increase risk of SJS, besides HIV itself can change drug metabolism, patient cytokine profile, and oxidative stress.

SJS is a severe and life threatening adverse cutaneous drug reaction. The main therapy for SJS is stop suspected drug and administration of high dose systemic corticosteroid, which may lead for further immunosuppression in HIV patient.

In this patient, systemic corticosteroid was given and showing an improvement, yet no other drug could be given because patient showing allergic reaction and fell to septic condition.

**Conclusion**
In the case of central nervous system infections, we should suspect of low immunity status, including HIV infection. However, some conditions can complicate the treatment of HIV patient with opportunistic infection, including increased risk of Stevens Johnson syndrome leading to worse prognosis.

**References**
- Toxic Epidermal Necrolysis caused by Catamotocet in a Patient with Human Immunodeficiency Virus Infection. Indian J Allergy Asthma Immunol 2008; 22 (1)