

HUMAN HERPESVIRUS 6 (HHV- 6) ASSOCIATED POST-TRANSPLANT ACUTE LIMBIC ENCEPHALITIS: A CASE REPORT

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Abstract

HHV-6 encephalitis is a serious complication after stem cell transplantation which is sporadically caused by human herpes virus 6 (HHV-6) reactivation. It causes neuropsychiatric disorders and cognitive impairment. The mortality rate remains high, even among survivors many patients are affected negatively. We report the case of a 41 years old woman who developed an acute limbic encephalitis after allogeneic hematopoietic stem cell transplantation for acute myeloblastic leukemia. Through a literature review we discuss the clinical, radiological, and therapeutic aspects of this uncommon condition.

Keywords: Human herpesvirus 6, Acute limbic encephalitis, Stem cell transplantation

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INTRODUCTION

Encephalitis due to HHV-6 can causes severe neurological disorders leading to death in immunocompromised patients [1, 2]. In the post-transplant context, the diagnosis is difficult because of rough symptoms and the absence of clinical or radiological specific signs [3].

CASE REPORT

A 41 years old patient was admitted for the management of an acute myeloid leukemia caryotype t [11,19] with WT1 overexpression classified intermediate risk (MRC ELN) . She initially received induction chemotherapy according to the CLARA protocol with complete remission. After a course of consolidation, the patient was admitted for phenoidentic transplant 10/10, Cytomegalovirus status of donor and recipient was negative (CMV -/-) with myeloablatif based packaging: EDX / TBI was performed with Graft Versus Host Disease (GVHD). prophylaxis with cyclosporine and Methotrexate. At day 2, the patient developed grade II mucositis for which she was put under Acyclovir 5mg/Kg/8h and Morphine until 100mg/24h. At day 10 post- transplant, the patient developed delirium with hallucinations and

temporo- spatial disorientation, hypoxemia and respiratory acidosis. CT scan and MRI were normal as well as the lumbar puncture and the possibility of drug toxicity was advanced. The outcome was marked by persistent of persecution delirium with visual hallucinations. At day 17, a skin rash and tonico-clonic epileptic movements appears (GVHD, Weakly positive PCR HHV-6). A novel lumbar puncture showed lymphocytic meningitis and the viral PCR a positive LCR HHV-6 reaction. The electroencephalogram showed a polyrhythmic, irritative, two slow spikes track. The brain MRI showed a consistent bilateral and symmetrical involvement suggesting hypoxia lesions of limbic encephalitis (figure 1,2).

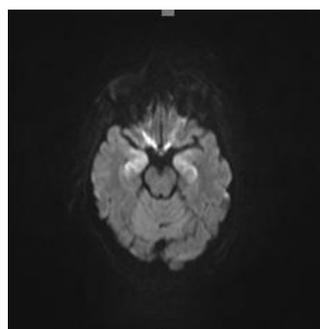


Figure 1: brain MRI showed a consistent bilateral and symmetrical involvement suggesting hypoxia lesions of limbic encephalitis

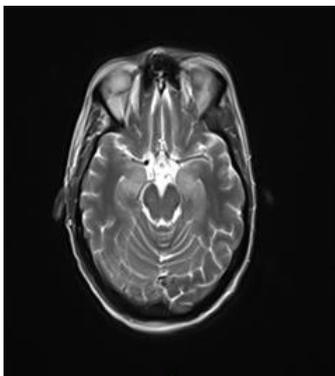


Figure 2: Brain MRI showing limbic hypoxic lesions

The patient was mad under Foscavir. In terms of GVHD, it was noted the appearance of active lesions with the introduction of corticosteroids at a dose of 2mg/kg/j. The death occurred by pseudomonas aerogenosa multiresistant infection.

DISCUSSION

Human herpes virus 6 (HHV -6) belongs to the family of Betaherpesvirinae and persists latently in the majority of the general population [4]. It includes two forms, A and B [5]. The target cells are primarily TCD4 lymphocytes [6]. In the context of hematopoietic cells (HCT), the reactivation of HHV -6 is common in more than 70 % of cases [7,8], relating to various post- transplantation complications [7,9,10]. Although the HHV -6 reactivation is common after allogeneic HCT, encephalitis develops sporadically if the blood level shows high reactivation [11, 12]. In recent literature review, the incidence of HHV-6 encephalitis was 8.3 % after umbilical cord transplantation and 0.5% after genotype or phenotype identical transplantation [13]. The high incidence of HHV -6 encephalitis in recipients of umbilical cord can be associated with T cell dysfunction , transplantation of cord blood are low in T cells which are immunologically immature in the absence of T - cells specific HHV 6 [11,14] .

CONCLUSION

HHV6 infection generally appears frequently with greater severity in the case of bone marrow transplantation. It occurs early and is more associated with the occurrence of encephalitis, pneumonia, myelosuppression and rash.

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