Quest Journals
Journal of Medical and Dental Science Research
Volume 13~ Issue 4 (April 2026) pp: 01-03
ISSN(Online): 2394-076X ISSN (Print):2394-0751
www.questjournals.org

Research Paper

A case report and literature review of a woman diagnosed with herpes meningoencephalitis due to febrile agitation in the immediate postpartum period.

Coulibaly fatoumata, Yassine Belhaj, Tazi Zineb, Fatim Zahra Fdili alaoui, Jayi Sofia, Hekmat CHaara, My Abelilah Melhouf
university Sidi Mohammed Ben Abdellah, Department of Gynecology-Obstetrics II, CHU Hassan II, Fez, Morocco
Corresponding author: Coulibaly fatoumata

Abstracts:
Herpes simplex virus (HSV) encephalitis is the most common of the sporadic viral infections of the brain. Herpes simplex virus type 1 (HSV-1) is most often the cause in 90%. The postpartum period is often conducive to a reactivation of Herpes simplex virus-1. We report a case of herpetic meningoencephalitis in a 19-year-old patient. The disease was diagnosed thanks to the Polymerase Chain Reaction (PCR) of the Cerebrospinal Fluid (CSL) in front of a table of acute agitation of the postpartum. The patient was put on Aciclovir for 15 days with a good clinical progression.

Keys world: *postpartum, extreme agitation, hallucinations, fever, oral herpes, PCR, evolution, prognosis*

*Received 28 Mar., 2026; **R**evised 06 Apr., 2026; **A**ccepted 08 Apr., 2026 © The author(s) 2026.*
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I. Introduction

the herpes simplex virus (HSV) is responsible for the most common form of non-epidemic viral encephalitis, with an incidence of 2 to 3 cases per million inhabitants per year, without seasonal variation [1]. Infection of the central nervous system with herpes simplex virus can occur as part of a generalized infection with visceral involvement or be limited to an involvement of the central nervous system. In the absence of treatment, the prognosis is bleak.

Patient and observation

This is a 19-year-old woman, without any notable medical or psychiatric history, admitted to maternity at the very beginning of work on a pregnancy estimated at 40 weeks of amenorrhea, followed by unremarkable progress. Upon admission, the constants were good: blood pressure at 110/70 mmhg, heart rate at 82 BPM, eupneic with a temperature of 37.3°c, urine test strip negative. The biological assessment carried out was correct. On the obstetrical level, the bishop was favourable with spontaneous rupture of the water sac, clear amniotic fluid, and a baby eutrophic on ultrasound.

Natural childbirth was accepted; labour proceeded smoothly under antibiotic coverage with normothermia throughout the labour. Vaginal delivery of a healthy eutrophic newborn with episiotomy. The immediate postpartum haemorrhage was medically controlled. 3 hours after delivery, the patient presented an intense prolonged agitation crisis without any notion of convulsive seizures. Upon admission to reanimation; the immediate examination after intubation and sedation highlights: hyperthermia at 39.9°C, tachycardia at 135 bpm, correct blood pressure, correct capillary glucose. The examination highlights a good uterine globe with minimal bleeding. On the biological balance, we found: hyperleukocytosis at 21000 versus 11000, CRP 27 versus 11, correct ionogram, 4-procalcitonin, negative blood cultures, frankly positive leucocyturie; sterile culture.

The brain scan c-/c+ performed after immediate stabilization returned without abnormality, as well as the lumbar puncture. Brain MRI could not be performed immediately by technical default. The electroencephalogram returned to normal as well. She was initially put on C3G+ Perfalgan and extubated at day 2 of the postpartum period, keeping transient episodes of agitation.

In front of the notion of visual and auditory hallucinations appearing on the 3rd day associated with oral lesions suggestive of herpes: the diagnosis of meningoencephalitis was suspected, hence the control of the lumbar puncture: Proteininorachie 0.85, Glucorachie 0.51, direct examination negative, sterile culture with a positive multiplex PCR for HSV1.

The diagnosis of meningoencephalitis was confirmed, and the treatment was modified. Acyclovir at 10 mg/kg/08 h was administered for 15 days with complete regression of symptomatology. Patient declared discharged without neurological sequelae.

II. Discussion:

The incidence of herpes simplex encephalitis, due in 90% of cases to HSV1, is from 1 to 3 cases/1 million inhabitants per year. HE occurs sporadically, at all ages of life, and without seasonal factors; it can reach new-born, the adult man as woman at any age with a peak around fifty [2]. Herpes simplex viruses are members of the family Herpesviridae, characterized by their neuro-tropic properties, and their neuroinvasive and neurovirulent potential. We differentiate two viral serotypes, HSV-1 and HSV-2. HSV-1 mainly infects the sphere while HSV-2 essentially infects the genital sphere. Its main symptoms are: fever 92%, personality disorders 85%, language disorders 76%, dysautonomia 60%, ataxia 40% and convulsions 38%, sometimes simulating a psychiatric pathology.[3].

Herpetic skin-mucosal lesions are exceptionally associated with neurological involvement. Their absence does not in any way eliminate the diagnosis.

The search for viral DNA by PCR in the cephalo-spinal liquid is the reference examination. the cephalo-spinal liquid is most often lymphocytic (100 elements/mm3 on average), with a moderately high protein level (0.5 to 1.5 g/l), and a normal Glucorachie[2]. A negative PCR must be repeated 3 to 7 days later, and only a second negative PCR permanently eliminates herpes encephalitis.[4].

The social and emotional stress experienced by women during pregnancy and childbirth leads to a state of immunosuppression which would be a risk factor for herpes simplex encephalitis postpartum. [5].

Some cases have been identified in the literature, notably one case reporting herpetic encephalitis in a 28-year-old girl complicated by a cerebral hematoma [4], another case has been reported, initially wrongly taken as a psychosis. puerperal [6].

Brain CT examination is often initially normal, as was the case with our patient, but it allows to eliminate other diagnoses (tumour, abscess, thrombophlebitis). After a few days, it allows for the visualization of hypodense lesions, corresponding to oedema, or hyperdense, corresponding to necrosis and haemorrhage. These images are typically frontal and especially temporal [7]. The MRI allows for visualizing these same lesions earlier, often as early as 24 hours [8] .

The electroencephalogram is the examination that is most disrupted at the earliest stage, but often more difficult to obtain in an emergency. The anomalies can be little specific (slowing of electrical activity, variable over time, then permanent) or much more typical (periodic slow wave discharges). In one third of the cases, epileptic discharges can be observed. In any case, this examination alone cannot establish the etiological diagnosis of encephalitis [9].

Treatment is based on the administration of intravenous acyclovir 10 mg/kg every 8 hours (30 mg/kg/day) [2] . the duration of treatment is 10 days and that it must be adapted according to the patient's condition and response to treatment. In practice, it is accepted by all that the treatment to be fully effective must be of a duration of 14 to 21 days.

Factors of poor prognosis include age<30 years, a Glasgow score <6 and delay in treatment with acyclovir [10]

The prognosis remains serious however: mortality ranges from 30 to 50%, according to studies, sequelae concern 20 to 40% of survivors [9].

III. Conclusion

Herpetic encephalitis, a rare and formidable complication of a frequent and banal infection, remains a disease whose mechanisms are incompletely elucidated, and the clinical prognosis still poor, despite diagnostic and therapeutic possibilities. One should always think about it in the face of a postpartum febrile behaviour disorder and in the absence of fever, one should not wrongly diagnose puerperal psychosis.

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