

# Neonatal Herpes with Classical Skin, Mucous and Eye Involvement: A Case Report

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## Abstract

Neonatal herpes simplex virus infection (HSV) is a vertically transmitted infection, transferred to baby from mother during or before delivery and also through infected secretions after birth. Incidence varies all over the world varying from 1: 3200 births to 1: 60000 births. Untreated infections are often life threatening. It should be considered as a differential diagnosis in a febrile infant less than 1 month old with risk factors. Definitive culture or polymerase chain reactions are used for the diagnosis. Treatment consists of anti-viral therapy with acyclovir. Early diagnosis and prompt treatment will alleviate the related morbidity and mortality. Here we report a case of neonatal herpes simplex virus infection diagnosed early and treated effectively with acyclovir.

## Introduction

Neonatal herpes simplex virus (HSV) infections are often life-threatening if untreated. A high index of suspicion with early diagnosis and prompt initiation of treatment, even before confirmatory tests like PCR, often results in favorable outcome in these cases. This case exemplifies this fact; where, the classical skin lesions in a week old neonate admitted with fever, lethargy and respiratory distress was suspected to be Congenital Herpes, prompt treatment was initiated, followed by early diagnosis and a favorable outcome.

## Case Report

A term, male, 7-day-old baby weighing 2000 g, born to a primi gravida mother, an outcome of spontaneous normal vaginal delivery was admitted to our hospital with history of lethargy, fever and respiratory distress since 4 days (Figure 1). On review the antenatal, intra-partum and early postnatal history was uneventful. On physical examination, baby was febrile, had respiratory distress (Downey's score-3) and feeding poorly. The systemic examination was normal. The initial workup revealed, normal hematology, positive sepsis screen with normal renal and hepatic parameters. The CSF biochemistry and cytology was within normal limits. Urine, blood and CSF cultures sent showed no growth.

On 3<sup>rd</sup> day of admission (10<sup>th</sup> postnatal day), the baby had multiple skin lesions that were vesicular eruptions with erythematous base on the face, trunk and the right cheek. The lesions later progressed to involve the nose and scalp. The fluid in the vesicles was clear and the gram stain (Tzanck smear) revealed plenty of giant cells. On detailed evaluation, there were similar lesions on the mucosa of the oral cavity with dryness of cornea. Considering the above findings a strong suspicion of HSV infection with SEM (Skin, Eye, Mucosa) type was kept in mind and IV acyclovir in recommended doses was initiated. The IgM for HSV1 and the HSV I Polymerase Chain Reaction (PCR)

was positive. The baby improved over time and was discharged in a clinical stable state after completion of the 10 day acyclovir course.



Figure 1: Neonatal herpes simplex virus infected infant.

## Discussion

There are few countable cases of neonatal herpes diagnosed on the basis of clinical presentation and initiated with early management [1]. During a primary HSV outbreak, there is a 33% risk of vertical transmission; this is 3% during a secondary reactivation [2]. Perinatal

transmission of HSV1 occurs in three ways: antenatal (5%), intrapartum (85%) [3] and postnatal (10%). Even though, HSV2 accounts for upto 70% of neonatal HSV infection, it is mainly transmitted antenatally. Our case did not have the spectrum of findings such as microcephaly and hydrocephalus; which are seen in the antenatal acquired cases. The majority of women with HSV seropositivity do not report a history of symptoms consistent with HSV. Hence, in our case, even though, there was no maternal history of the HSV infection, the clinical spectrum and supportive investigations suggest towards a HSV1 intrapartum infection.

## Conclusions

Recognizing HSV infections may be at times difficult leading to a significant morbidity and mortality. The neonatal HSV infection can

be diagnosed only if the clinician has a high index of suspicion in a case presenting with fever and skin lesions. Rapid diagnosis and early initiation of treatment is essential to preventing significant morbidity and mortality in the neonate.

## References

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