



# Rush to De-liver: A Fatal Case of Herpes Simplex Hepatitis in Pregnancy

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## BACKGROUND

Herpes Simplex Virus (HSV) hepatitis is a rare but potentially fatal presentation of HSV that can affect immunocompromised individuals such as pregnant women, particularly in the 3rd trimester. It can lead to liver failure with mortality up to 75%. Early recognition with the initiation of antivirals and supportive therapy has been shown to reduce mortality, however, insult to the liver can lead to liver failure complicated with encephalopathy and ascites. We present a case of HSV hepatitis in pregnancy which despite supportive therapy and acyclovir, resulted in demise.

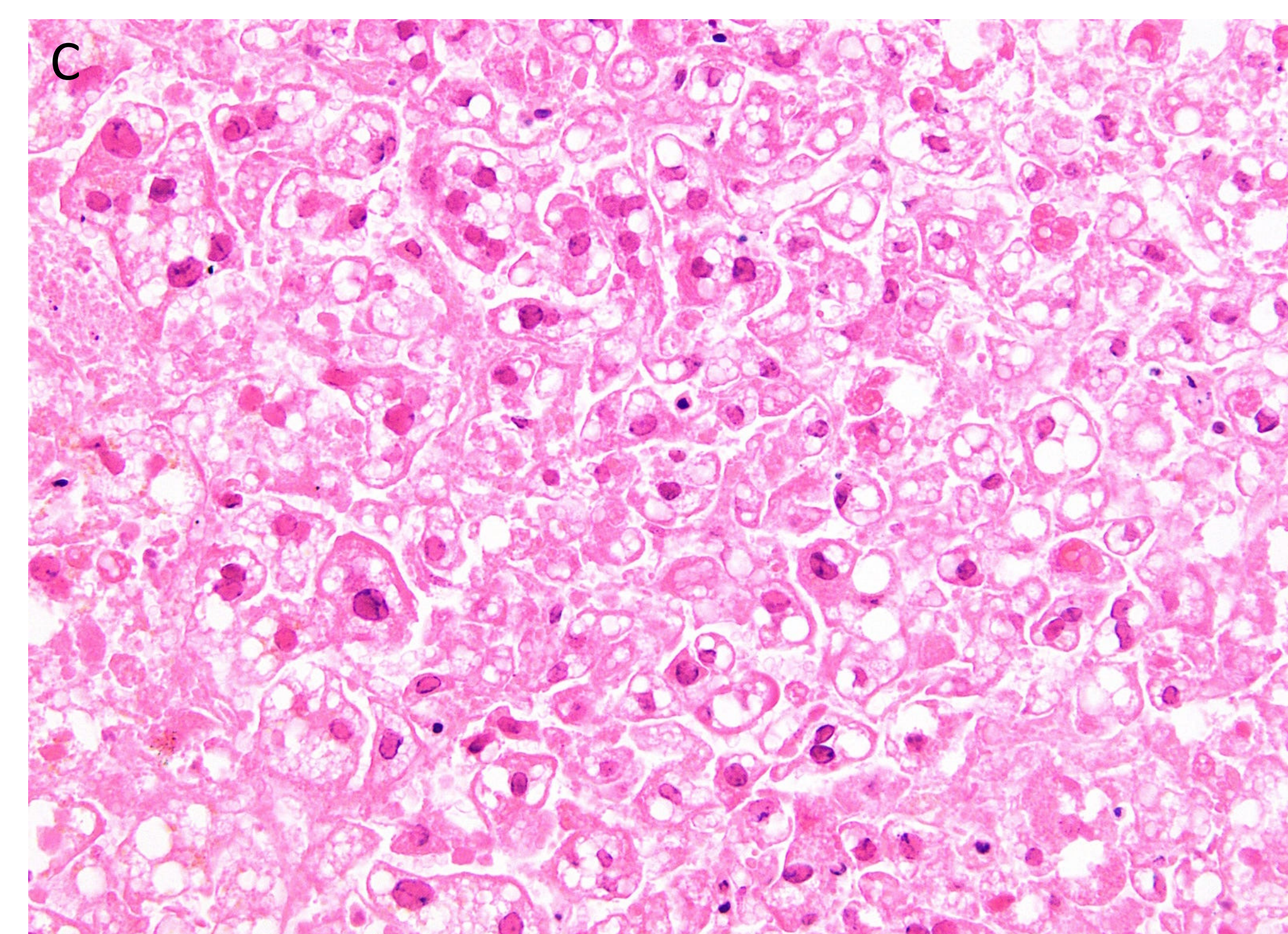
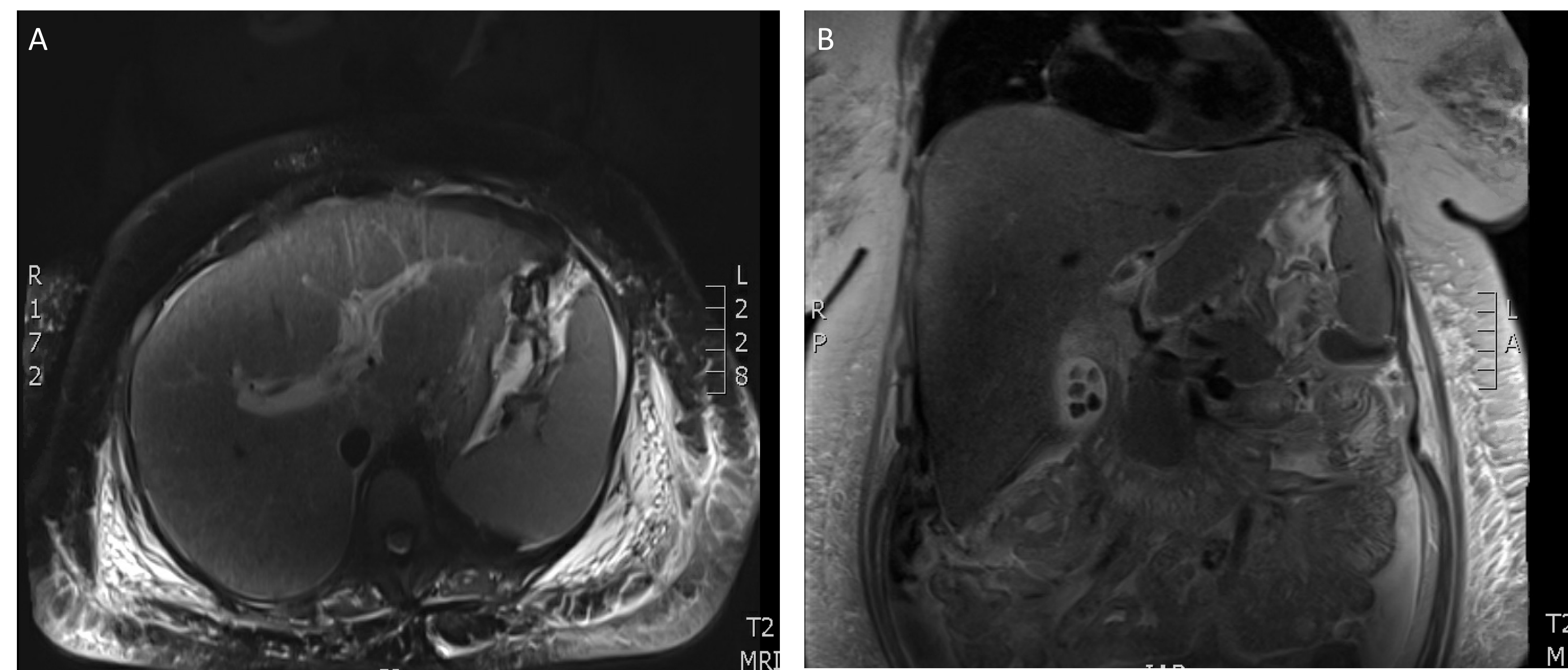
## CASE PRESENTATION

A 24 year old pregnant female at 23 weeks gestation presented to a facility with complaints of fevers and fatigue. She was discharged and treated symptomatically. 2 weeks later she developed encephalopathy, profound liver failure, and thrombocytopenia, with induction of labor and loss of the infant. She was intubated and developed shock requiring pressors. She was placed on Molecular Adsorbent Recirculating System (MARS) dialysis for support. Cultures were collected, including HSV panel, which was positive for HSV-1. Acyclovir was immediately started, and patient continued to be on supportive therapy. She improved on MARS and acyclovir, with improvement of her liver enzymes and viral load, and later extubated.

## CASE PRESENTATION CONT.

Patient appeared to return to baseline, however days later, patient developed jaundice, ascites significant for spontaneous bacterial peritonitis, and encephalopathy refractory to lactulose and rifaximin. Despite acyclovir, broad-spectrum antibiotics, and prior MARS therapy, her liver enzymes increased and patient had to be reintubated, where she had multiorgan failure and expired to disseminated HSV.

## IMAGES



A. T2 MRI Transverse View showing significant Hepatomegaly significant for widespread hepatocellular dysfunction/ Hepatitis

B. T2 MRI Coronal View showing significant hepatomegaly, with noted Cholelithiasis unremarkable bile duct. Significant for widespread hepatitis, from HSV

C. Pathology slide (not of patient) showing hepatocellular necrosis and cytototoxicity from widespread HSV infection. Likely cellular process ongoing for this case.

## DISCUSSION

This case demonstrates a rare occurrence of HSV hepatitis in a pregnant woman. Recognition of HSV occurred once patient developed acute liver failure and encephalopathy, however, based on her history patient likely presented with HSV symptoms, such as fevers, and fatigue that remained untreated. Despite supportive therapy such as MARS and Acyclovir, patient expired of liver failure from HSV. This case shows the importance of considering HSV in the pregnant population, for if it were recognized and treated earlier, patient may not have reached fulminant liver failure resulting in death. In conclusion, HSV hepatitis and initiation of early antiviral therapy should be considered in all pregnant patients with concern for evolving hepatic failure.

## REFERENCES

- Masadeh M, Shen H, Lee Y, et al. A fatal case of herpes simplex virus hepatitis in a pregnant patient. *Intractable Rare Dis Res.* 2017;6(2):124-127. doi:[10.5582/irdr.2017.01013](https://doi.org/10.5582/irdr.2017.01013)
- Herrera CA, Eichelberger KY, Chescheir NC. Antiviral-resistant fulminant herpes hepatitis in pregnancy. *AJP Rep.* 2013;3(2):87-90. doi:[10.1055/s-0033-1343791](https://doi.org/10.1055/s-0033-1343791)
- Hussain NY, Uriel A, Mammen C, Bonington A. Disseminated herpes simplex infection during pregnancy, rare but important to recognise. *Qatar Med J.* 2014;2014(1):61-64. doi:[10.5339/qmj.2014.11422X-6-40](https://doi.org/10.5339/qmj.2014.11422X-6-40)
- Anzivino E, Fioriti D, Mischitelli M, et al. Herpes simplex virus infection in pregnancy and in neonate: status of art of epidemiology, diagnosis, therapy and prevention. *Virology.* 2009;6:40. doi:[10.1186/1743-422X-6-40](https://doi.org/10.1186/1743-422X-6-40)
- Gonzalez R. Herpes simplex virus hepatitis. PathologyOutlines.com website:<https://www.pathologyoutlines.com/topic/liverherpeshep.html>. Accessed June 28th, 2022.