A Rare Presentation of HSV Type 2 Hepatitis.

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A Rare Presentation of HSV Type 2 Hepatitis

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BACKGROUND

Herpes simplex virus (HSV) hepatitis is a rare disease usually affecting immunocompromised patients. HSV hepatitis most commonly presents with vague flu-like symptoms and anicteric hepatitis making the diagnosis difficult. Early diagnosis with immediate treatment can be lifesaving as greater than 50% of patients are diagnosed at autopsy. We report a patient with lupus nephritis presenting with fever, painful left-sided inguinal lymphadenopathy and a rectal ulcer.

CASE PRESENTATION

29 year old female with lupus nephritis on daily prednisone and cellcept presented with a fever of 101.6°F associated with fatigue, myalgias, abdominal pain, left groin pain and diarrhea for 2 days. Physical exam was unremarkable except for tender left inguinal lymphadenopathy and a painful rectal ulcer. Labs were significant for a creatinine of 2.54 mg/dL (baseline 2.06 mg/dL). Infectious Disease evaluation included blood and fungal cultures, EBV and CMV serology, VZV, HIV testing, tick-borne disease (Borrelia, Anaplasma, Erlichia and Lyme), urine gonorrhea and chlamydia by DNA probe, rectal gonorrhea and chlamydia by RNA amplification and parvovirus serology which were all negative. CT abdomen and pelvis without contrast showed mild rectal wall thickening. Colonoscopy revealed exudative ulceration within the anal canal; a biopsy was performed. She remained febrile up to 105°F. Rectal lesion DNA probe and blood PCR were checked for HSV. On day 5 of hospitalization, she developed a transaminitis with AST 962 U/L, ALT 1236 U/L and normal bilirubin. Rectal lesion DNA probe, rectal lesion HSV immunostain and blood PCR results were positive for HSV type 2. Intravenous acyclovir was started for an HSV rectal ulcer complicated by HSV hepatitis. Biopsy of the rectal lesion showed numerous eosinophilic inclusions in epithelial and stromal cells and multinucleation of keratinocytes. The transaminitis and symptoms eventually resolved and the patient was transitioned to valacyclovir 1g q12hr for 21 days.

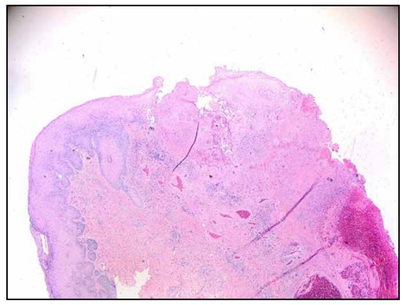

Figure 1: Extensively ulcerated anal skin with hemorrhage and acute inflammation (4x).

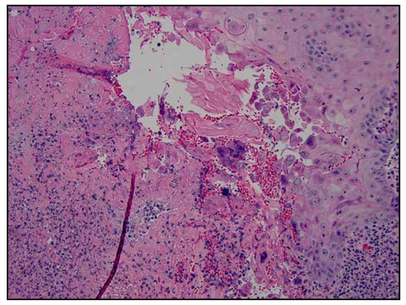

Figure 2: Epidermis with viral nuclear inclusions (inclusions show the 3 classic features of herpetic infection: Moulding, Multinucleation, Margination of nuclear host chromatin) (20x).

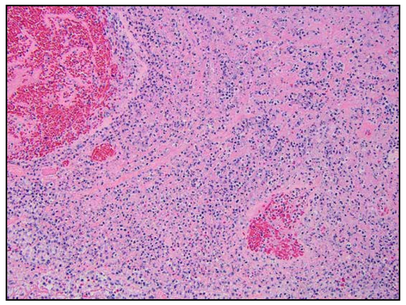

Figure 3: Stromal acute inflammation, nuclear debris and vasculitic changes, non-specific but often seen herpes viral infections (20x).

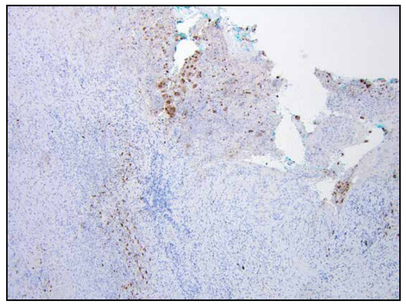

Figure 4: HSV immunostain positive (brown) in stromal cells and keratinocytes (10x).

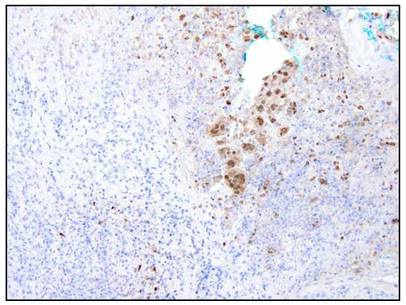

Figure 5: HSV immunostain positive in keratinocytes (immunostain is an antibody used to detect viral protein, so there is both nuclear and cytoplasmic staining even though the virus itself resides in host nuclei (20x).

DISCUSSION

This case demonstrates the importance of keeping HSV infection on the differential in immunocompromised patients with non-specific symptoms and consistent laboratory findings. It's estimated that approximately 95% of patients with HSV hepatitis have a characteristic liver profile with a 100-1000 fold increase in transaminases and a normal bilirubin. A lack of specific symptoms and lack of rapid diagnostic modalities make it particularly challenging to diagnose. It is important to initiate treatment immediately because it can progress to fulminant liver failure, disseminated intravascular coagulation and renal failure. The mortality rate for HSV hepatitis is up to 74% and up to 51% even with appropriate acyclovir therapy. A delay of a few hours can increase mortality exponentially, further highlighting the importance of early intervention. A high clinical suspicion is essential in making this crucial diagnosis.

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