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İmmunkompetan Hastada Sitomegalovirus Hepatiti: Bir Olgu Sunumu

Cytomegalovirus Hepatitis in Immunocompetent Patient: One Case Report

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ÖZ

Sitomegalovirus (CMV) enfeksiyonları immunkompetan erişkinlerde nadir klinik bulgulara sebep olmakta, genellikle asemptomatik ya da hafif seyirli klinik tablolar ile seyretmektedir. CMV immunkompromize hastalarda gastrointestinal, kardiyovasküler, hepatit, pnömoni ve nörolojik sistemde meningoensefalit gibi çeşitli klinik tablolara neden olabilmektedir. Bu çalışmada immunkompetan, lenfomonositozu olan ve ateş yakınması ile başvuran hastada CMV hepatiti olgusu sunulmuştur.

Anahtar Kelimeler: *Sitomegalovirus, hepatit, ateş, baykuş gözü*

ABSTRACT

Cytomegalovirus (CMV) infections cause rare clinical manifestations in immunocompetent adults, usually with asymptomatic or mild clinical manifestations. CMV in immunocompromised patients can cause various clinical tabulations such as gastrointestinal, cardiovasculer, hepatitis, pneumonitis and neurological systems like meningoencephalitis. In this study, presented a case of CMV hepatitis with immunocompetant, lymphomonocytosis and fever.

Keywords: *Cytomegalovirus, hepatitis, fever, owl eye*

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INTRODUCTION

Cytomegalovirus belonging to group β-Herpetoviridae is a cytopathic virus that has double-stranded DNA of 5 and is latent after primary infection. Although there may be significant differences in CMV infection according to geographical region and socioeconomic status, seroprevalence is high and widespread in the world. Whole body fluids can be transmitted through transplacental pathways and transparency. In healthy adults, it may be asymptomatic but may cause a mononucleosis syndrome-like clinical picture. Severe organ involvement is rare. Since virus replication can not be controlled in CMV infection in immunocompromised patients, morbidity and mortality may be high (1). In this study, a rare case of CMV hepatitis, which was treated with IV ganciclovir for 14 days after admission to a clinic with clinical findings in healthy young adults without any immunodeficiency, was investigated.

CASE REPORT

A 41-year-old male patient was admitted to our polyclinic with complaints of trembling fever, chills, fatigue, nausea and loss of appetite for two weeks. On physical examination, conscious open, fever: 38.2 ºC, TA: 120/80 mm-hg, KTA: 84 / min, S1, S2 natural, no additional sound was heard. There's no defense, no rebound. There is no hepatomegaly present, the traube area is closed with percussion. The sclera is icteric. Bilateral hands and feet have an edema. The patient was evaluated as fever. Laboratory tests have WBC: 6600 / µL, neutrophil ratio % 36.6 (37-45%), lymphocyte ratio % 53 (% 20-50), monocyte ratio:% 11.2 (% 2.5-10) lymphocytomonocytosis is present. The laboratory findings of the patient are shown in **table 1.** Anti-ds DNA: negative, Anti smooth muscle antibody (ASMA): negative, Liver kidney microsomal antibody (AMA): negative, Anti nuclear antibody (ANA): negative, Rheumatoid factor: negative, albumin: 2.8 gr / 5.9 gr / dl, erythrocyte sedimentation rate: 23 mm / h, AFP: 2.4 (0-8 ng / ml). Anti HAV Ig M: negative, Anti Hbc Ig M: negative, Rubella IgM: negative, Ruballa Ig G: positive, Hbs Ag: negative, Anti Hbs: negative, Anti HCV: negative, Ig G negative, CMV Ig M: positive, CMV Ig G: positive, CMV PCR: 165 IU positive, CMV avidity test was low and considered to be a recent infection.

Table 1. Laboratory findings of the patient

Examination	Before Treatment	After Treatment	Reference Range
WBC	6600	5000	4500-10300/µL
Hemoglobin	14	14.1	13.6-17.2 g/dL
Platelets	207000	212000	150000-450000/µL
ALT	91	22	0-45 U/L
AST	76	20	0-35 U/L
GGT	130	107	12-64 U/L
ALP	147	99	40-150 U/L
LDH	425	304	125-245 U/L
Total bilirubin	2.15	1.57	0.2-1.2 mg/dl
Direkt bilirubin	0.82	0.53	0-0.5 mg/dl
ÜREA	22	16	13-43 mg/dl
Creatinine	0.8	0.76	0.7-1.3 mg/dl
CRP	32	3.1	0-0.5 mg/L
INR	1.09		0.8-1.2
PTZ	13		10-14 second
APTT	24		22-34.5 second
CMV Ig M	8.94	5.64	AU/mL
CMV Ig G	12.8	73.9	AU/mL
CMV PCR	165		Copy/mL

In USG, the long axis of the spleen was evaluated as 14 cm, the perisplenic area as minimal free fluid, and pelvic 13 mm free fluid. Bleeding in splenogeal in CT and free fluid in the abdomen was evaluated. Ceftriaxone 2X1 IV therapy has been started. Liver biopsy was performed and pathological examination was performed in favor of CMV hepatitis, and specific owl eye cells were seen. **(Figure 1-2-3).**

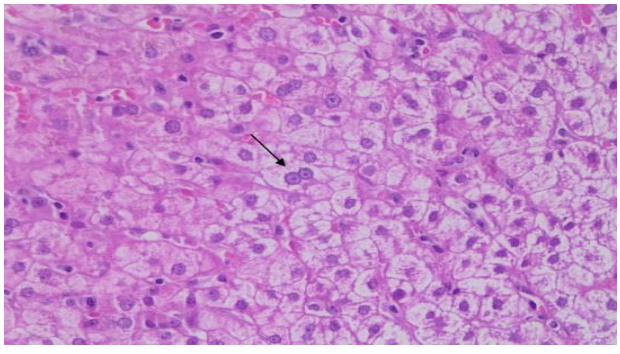

Figure 1. *Viral hepatocytes (owl eye)showing viral nucleation. HEx400.*

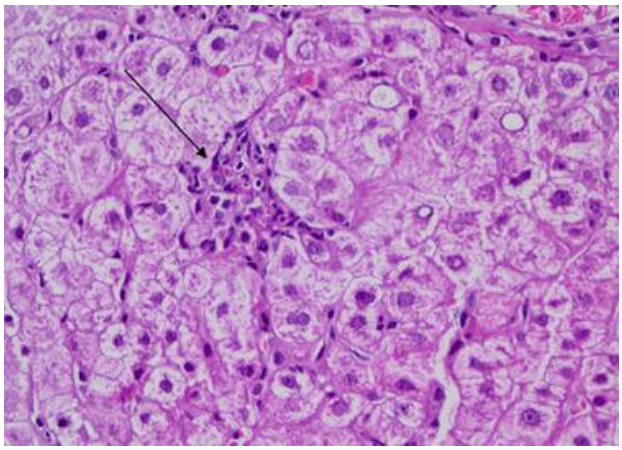

Figure 2. Focus on focal necroinflammation in the liver parenchyma. HEx400

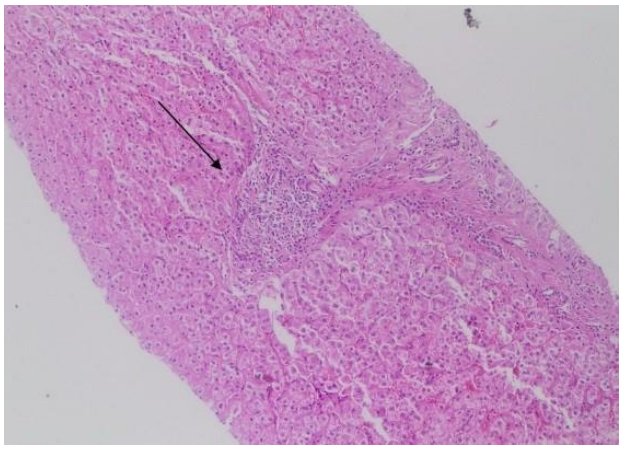

Figure 3. Portal in liver sections the field increased slightly to moderate mononuclear inflammatory infiltration. HEx100.

There was no reproduction in the urine and blood cultures of the patient. Gynecologic 5 mg / kg 2x1 IV therapy with antibiotics under laboratory conditions and clinical compliance with fever for 72 hours was initiated.

On the second day of treatment, the fever was reduced to 36.6 ºC and the control USG taken 10 days after the treatment was evaluated as normal. Ganciclovir treatment has been completed in two weeks. Patient whose general condition and laboratory findings were normal were discharged with follow-up of the outpatient clinic.

DISCUSSION

Most often, CMV infection in the immunocompetent patient is self-limiting and asymptomatic. Or a mild course of mononucleosis syndrome-like clinical picture. Severe organ involvement is rare (2). Liver dysfunction is often seen in symptomatic CMV infection. Alkaline phosphatase and bilirubin increase are less common, but transaminase elevation is the most common laboratory finding. Usually within days and weeks hepatitis can limit itself (3). Along with transaminase increase, alkaline phosphatase and mild bilirubin increase were observed in our patient. Clinical suspicion and serology are important to diagnose. IgM first becomes positive and may increase in serum for about 4 weeks. In the case of IgM and IgG positivity, IgG avidity assesment confirms whether the transmitted infection is due or not (4). The CMV antigenemia test is based on the detection of antibodies against the immediate-early antigen and the pp65 antigen by immunofluorescent antibody. The sensitivity of this method is % 60-100 and the specificity is % 83-100. Histopathologic examination is gold standard for CMV. By increasing the size of typical CMV cells, the halo image with the inclusion body forms an image similar to the owl's eye (5). Another diagnostic method is the PCR technique, which can be viewed from blood, urine, sputum and tissue specimens. In our case, IgM and Ig G were found to be serologically examined and CMV infected cells showing a typical owl eye image on the liver biopsy specimen. Viral load was also detected by CMV DNA PCR. CMV infection in healthy people can be corrected without treatment (6,7). In CMV disease fever may last 2-3 weeks. It should be remembered in cases of unknown fever and lymphomonocytosis (8). CMV hepatitis can usually be mild to moderate, but severe fatal hepatic necrosis may develop. In severe cases, initiation of ganciclovir treatment is decided according to the patient (9,10). In our patient, transaminase elevation, alkaline phosphatase and gamaglutamyl transferase, mild bilirubin elevation, fever, persisting persisting of the clinic and ganciclovir IV treatment were given to the patient for two weeks.

Although cytomegalovirus infection is frequent in the adult age group, immunocompetent individuals rarely lead to severe clinical manifestations. CMV hepatitis should be considered among the causative agents of hepatitis. The treatment decision should be made according to the current clinic of the patient.

The case was presented as a poster report at the 2017 KLİMİK Congress.

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