

Severe Dengue with Acute Hepatitis and Pleural Effusion Manifestations in Dengue Hemorrhagic Fever

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ABSTRACT

Dengue infection is a disease caused by dengue virus with clinical manifestation such as fever, myalgia, arthralgia with leukopenia, rash, lymphadenopathy, trombositopenia and diatesis hemorrhagic. The incidence rate in Indonesia is 6-15 per 100.000 people. Diagnosis of dengue infection is confirmed by serological test and viral detection. The management of dengue infection is symptomatically and with supportive therapy to substitute the fluid loss due to plasma leakage. We report a case of severe dengue hemorrhagic fever with acute hepatitis confirmed by several laboratory test such as CBC, liver function test, dengue serological test. After we gave supportive therapy, the patient gets significant improvement.

Keyword: Dengue Hemorrhagic Fever, Acute Hepatitis, Pleural Effusion

INTRODUCTION

Dengue infection is caused by dengue virus containing of 4 serotypes belong to the family flaviviridae genus flavivirus. This infection is endemic in Southeast Asia. Estimated cases each year are 50-100 million cases / year with 500,000 DHF cases and 20,000 deaths.(Nimmannitya et al, 2010) In Indonesia, the incidence rate is 6 - 15 per 100.000 people. (Suhendro et al, 2017)

Clinical manifestations of dengue infection vary from mild to severe where impaired liver function, kidney function and encephalopathy can occur. Diagnosis of dengue infection is confirmed by detecting IgM dan IgG or NS1 antigen and viral detection (Nimmannitya et al, 2010).

Hepatitis and liver damage in dengue infection varies from mild, moderate to causing fulminant hepatitis. This hepatitis also contributes to mortality and morbidity and extends the length of stay. Dengue treatment with hepatitis is supportive therapy until recovery/convalescence occurs. (Ishtiaq et al, 2018)

We want to report one case of severe dengue hemorrhagic infection with symptoms and signs of acute hepatitis.

CASE REPORT

Female patient, 41 years old, presents with fever on day 5. Fever increases suddenly and does not go down with antipyretic drugs. Abdominal pain was found accompanied by nausea and vomiting experienced by the patient in day 3, the patient also complained of coughing without phlegm. Dyspnea with respiration rate 24 x/minute. Urinating normally.

She had physical examination compos mentis state with normal blood pressure, pulse 112x/minute, yellow sclera are not found, in thorax examination found vesicular

respiratory sounds, additional sounds not found. In abdominal examination found bloating and distension, tenderness in the epigastrium, the liver and spleen are difficult to assess. The tourniquet test positive.

Thrombocytopenia, aspartate transaminase level increased with immunoglobulin M and Immunoglobulin G are found. In abdominal ultrasonography are found bilateral pleural effusion, ascites and suggestive cholecystitis. With a dengue hemorrhagic fever grade 3 with acute hepatitis, the patient underwent assering 20cc/KgBW, ppi injection 1 fls/IV/12hr, oral sistenol, domperidone 10mg and liver protector three times a day.



Figure 1. Abdominal USG showing ascites and pleural effusion.

DISCUSSION

Impaired liver function in dengue infection can occur in both dengue fever and dengue hemorrhagic fever, although some studies have found severe liver function disorders to increase mortality and prolong treatment. In these patients, acute hepatitis in dengue hemorrhagic fever is indicated by IgG and IgM anti dengue (+), pleural effusion and ascites, due to plasma leakage, other causes of acute hepatitis have also been excluded, including non-reactive IgM Anti HAV, HBsAg and Anti HCV, as well as Anti Leptospira IgM. In acute hepatitis caused by dengue hemorrhagic infection, aspartate aminotransferase (AST) is usually much higher than alanine transaminase (ALT) because AST apart from the liver is also thought to originate from damage to myocytes. In viral hepatitis ALT is higher or at least the same as AST levels, this can distinguish the two. In this patient AST levels of 1368 U / L, are much higher than ALT levels which is 753 U / L (Dalugama et al, 2019; Parkash et al, 2010).

Treatment of acute hepatitis patients in dengue infection is with supportive therapy, namely adequate hydration and administration of symptomatic drugs. Some cases are given N acetyl-cysteine in hepatic failure in addition to standard hepatic failure treatment. (Ishtiaq et al, 2018; Souza et al, 2004). In this case, the patients is given supportive therapy by providing fluids and liver protective drugs and the condition improves on the eleventh day of fever, liver function improves with AST 150 U/L and ALT 313 U/L, platelets increase above 100 thousand and patients get outpatient treatment.

CONCLUSION

One case of acute hepatitis has been reported in dengue hemorrhagic infection, the health condition is improving after receiving supportive therapy. In dengue hemorrhagic fever screening injury in liver is important to predict the severity.

Declaration by Authors

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