

ORIGINAL ARTICLE

THE PROFILE AND PATIENT ACUTE HEPATITIS CHILDREN OUTPUT IN DR SOEBANDI JEMBER HOSPITAL

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ABSTRACT

Background: Indonesia is an endemic area for Hepatitis akut. District of Jember determines the status of extraordinary event Hepatitis akut at the end of 2019. The purpose of this study was the profile and patient acute hepatitis children output in dr Soebandi Jember Hospital in December 2019 until January 2020.

Methods: This study was *retrospective descriptive*. The material was taken of the medical records Hepatitis akut patient at the pediatric department of the dr. Soebandi Hospital in Jember.

Results: In this study, patients most often occurred in male, age ranged between 7 – 14 years, and lived on the villages. The most common of clinical manifestation are anorexia, jaundice, fever, hepatomegaly, dark urine, vomiting and abdominal pain. The result of laboratory examination showed that Hepatitis acute patients had elevated of SGOT , SGPT, *direct* and *total bilirubin*. The combination of curcuma with SNMC (*Stronger Neo-Minophagen C*) reductly significant SGOT and SGPT serum levels (p < 0,001).

Conclusion: The combination of curcuma with SNMC (*Stronger Neo-Minophagen C*) reductly SGOT and SGPT serum levels in hepatitis patients.

Introduction

Indonesia is an endemic area of acute hepatitis. Acute viral hepatitis (HAV) is the most common type of viral hepatitis that is transmitted by the fecal-oral route. In developing countries, HAV generally occurs in children with age.¹ The main signs and symptoms include anorexia, nausea, vomiting, abdominal pain, jaundice, and hepatomegaly. Elevated liver enzymes SGOT and SGPT are the main laboratory findings in HAV-infected children.^{1,2} The diagnosis is confirmed by the presence of anti-HAV IgM in the patient's blood.³ Giving curcuma tablets is used as an additional supplement that functions to improve liver function and improve appetite.² SNMC (Stronger Neo Minophagen C) is an injection preparation with the main content of glycyrrhizin derived from herbal plants which is used to treat liver disorders.^{3,4}

At the end of 2019, there was an increase in reports of cases of diseases caused by the acute hepatitis virus. The Jember Regency Government has determined the status of an Acute Hepatitis Extraordinary Event (KLB). The purpose of this study was to see the profile and outcomes of acute hepatitis patients in children at Dr Soebandi Hospital Jember in December 2019-January 2020.⁹

Method

This study is a descriptive retrospective. The research materials and subjects used were data taken from the medical records of patients diagnosed with acute hepatitis at the Children's Section of Dr. Soebandi Hospital, Jember. The affordable population of this study were all pediatric patients with new cases diagnosed with

acute hepatitis in December 2019-January 2020. The inclusion criteria for the study were age 14 years, diagnosed with acute hepatitis with increased levels of SGOT and SGPT.

The variables collected were: Demographic Characteristics (gender, age and place of residence), Clinical Features (vomiting, abdominal pain, fever, jaundice, hepatomegaly, dark urine and anorexia). Laboratory tests include SGOT, SGPT, direct bilirubin, total bilirubin, anti-HAV Igm and HBsAg. The output seen is the recovery of acute hepatitis patients at Dr. Soebandi Hospital based on an assessment of the decrease in SGOT and SGPT, as well as the length of stay of patients on curcuma administration compared to curcuma + SNMC administration.

Results

In this study, patients with acute hepatitis most often occurred in boys (68%) compared to girls (32%). Characteristics for the age of the 25 patients with acute hepatitis in children, most of whom were school age, namely 7-14 years, amounted to 17 people (68%). Characteristics for the place of residence of the 25 patients with acute hepatitis in children, most of whom lived in the village, which amounted to 13 people (52%). adalah usia sekolah yakni 7 –14 tahun berjumlah 17

The most common clinical symptoms in this study were anorexia (52%), jaundice (48%), fever (44%), hepatomegaly (40%), dark urine (36%), vomiting (32%) and abdominal pain (32%).

In this study, all patients were checked for SGOT and SGPT (100%), there were 12 patients who were checked for direct bilirubin and total bilirubin based on clinical symptoms of jaundice. There were 6 patients who were checked for IgM anti-HAV and there were 10 patients who were checked for

Table 2. Clinical Symptoms & Laboratory Examination at the beginning of diagnosis

VARIABEL		n	Persentase (%)
Clinical Symptoms	Vomited	8	32
	Abdominal pain	8	32
	Fever	11	44
	Jaundice	12	48
	Hepatomegali	10	40
	Dark urine	9	36
	Anorexia	13	52
Laboratory examination	SGOT	25	100
	SGPT	25	100
	Bilirubin direct	12	48
	Bilirubin total	12	48
	IgM anti HAV	6	24
	HBsAg	10	50

HBsAg.

The SGOT level of patients at Dr. Soebandi Hospital Jember was taken at an average value of

Table 1. Characteristics of patients with acute hepatitis in children

VARIABEL		n	%
Gender	Men	17	68
	Women	8	32
Age	0-6 th	8	32
	7-14 th	17	68
Residence	Desa	13	52
	Kota	12	48

1272 U/L at the beginning of the patient's admission, the results of the evaluation after the patient was given treatment showed a decrease in the average SGOT value of 315 U/L.

While the average value of the initial evaluation of SGPT was 1079 U/L and experienced a decrease in the value of SGPT to 448 U/L.

Table 3. SGOT and SGPT levels in acute hepatitis patients at the beginning of diagnosis and evaluation

Pemeriksaan Lab	Awal	Evaluasi
SGOT	1272 U/L	315 U/L
SGPT	1079 U/L	448 U/L

The administration of curcuma reduced the SGOT value by 65%, while the administration of curcuma together with SNMC reduced the SGOT value by 72%. The Saphiro-Wilk normality test resulted in $p > 0.05$, meaning that the data was normally distributed. Paired T-test results p value < 0.001 means that there is a significant difference between the administration of Curcuma xanthorrhiza extract, and Curcuma xanthorrhiza extract + SNMC on the initial SGOT value and the evaluation SGOT after 4 days.

The administration of curcuma reduced the SGPT value by 44%, the administration of curcuma together with SNMC reduced the SGPT value by 59%. The Saphiro-Wilk normality test resulted in $p > 0.05$, meaning that the data was normally distributed. Paired T-test results p value < 0.001 means that there is a significant difference between the administration of Curcuma xanthorrhiza extract, and Curcuma xanthorrhiza extract + SNMC on the initial SGOT value and the evaluation SGOT after 4 days.

In the administration of curcuma and curcuma + SNMC in this study, patients had an average hospitalization period of 4 days.

Tabel 4. Outcome of Acute Hepatitis Patients

SGOT value comparison					
Treatm ent	n	Perbandingan Lab			Masa Raw at
		SGOT Before	SGOT After	%	
Cur*	1 2	929	325	65	4
Cur + S ⁰	1 0	1080	302	72	4

SGPT Value Comparison					
Treatme nt	n	Perbandingan Lab			Masa Raw at
		SGP T Befor e	SGPT After	% Penuruna n	
Cur*	1 2	636	355	44	4

Cur + S ⁰	1	1337	542	59	4
	0				

Ket :

Cur* = Curcuma xanthorrhiza extract

Cur+ S⁰ = Curcuma xanthorrhiza extract + SNMC

This study is a retrospective study based on data in medical records so that researchers only process data based on data that has occurred in the past.

This study is in line with research conducted by Rewatkar et al, that acute hepatitis occurs more often in boys than girls with a ratio of 1.45:1. This is associated with the activity of boys who are more active than the activities of girls.¹¹

Extraordinary incidence of acute hepatitis in Thailand in schools with 269 students aged 7-12 years. There were 70 of 89 subjects who were examined serologically with positive anti-HAV, 16 of them with positive IgM anti-HAV.5 Acute hepatitis virus infection that occurs in childhood is generally asymptomatic or with mild symptoms.5,6 Infections that occur in childhood Subsequent age can only be determined by laboratory examination of liver function.¹¹

The initial clinical picture is a prodromal phase of viral infection with nonspecific symptoms including nausea, vomiting, anorexia, weakness, weight loss, subfebrile fever, myalgia, arthralgia, and headache.⁷ Patients had an anicteric phase on average of 7 days. Output becomes icteric phase with dark urine due to the excretion of bilirubin, and pale stools may be followed.^{8,10} Jaundice only occurs in 10% of children aged less than 6 years, 40% of children between the ages of 6 and 14 years, and 70% in children over 14 years of age. The risk of transmission decreases 1 week after the onset of jaundice.¹⁰ Additional symptoms include

abdominal pain, pruritus, arthralgia, itching, fever and hepatomegaly. Duration of symptoms in weeks averaged 4 weeks, and correlated with HAV viral load. Spontaneous resolution with minimal sequelae.^{1,2}

Elevated SGOT and SGPT values are a sign of hepatocellular inflammation and liver damage.²

In this study, there were 6 patients who were checked for anti-HAV IgM due to limited reagents in the hospital. Anti-HAV IgM can be detected 5-10 days before the onset of symptoms and can persist for up to 6 months after infection.^{1,2}

The administration of Curcuma tablets according to the recommended dosage is used as an additional supplement that functions to improve liver function and improve appetite. According to research conducted by Hartono using a dose of 5-10 mg/kgBW/day has been shown to be able to repair damaged liver cells and is hepatoprotective.²

Curcuma has protective and therapeutic effects on oxidative-associated hepatitis through suppression of proinflammatory cytokines, lipid peroxidation products, PI3K/Akt and hepatic stellate cell activation, as well as avoiding cellular responses to oxidative stress such as Nrf2, SOD, CAT, GSH, GPx and GR expression. Curcuma itself acts as a free radical scavenger on the activity of various types of ROS through phenolic, -diketone and narcotic groups. Further clinical studies are still needed to identify the structure-activity relationship and molecular mechanism of curcuma in oxidative-related liver disease.²

Stronger Neo-Minophagen C is a drug used to correct abnormal liver function in chronic liver disease.³ Stronger Neo-Minophagen C contains Monoammonium glycyrrhizinate (like

glycyrrhizin), amino acetic acid, and L-cysteine HCl.⁴ The SNMC dose is 40-60 mL by intravenous injection or once-daily intravenous infusion. The maximum daily dose is 100 mL. Side effects that may occur during the use of Stronger Neo-Minophagen C include shock, pseudoaldosteronism, severe hypopotassemia, hypertension, Na retention, swelling, and weight gain.

Contraindications should not be used by patients with known allergies to the content of Stronger Neo-Minophagen C and patients with a history of aldosteronism, myopathy and hypopotassemia.

SNMC may interact with thiazides, ethiazide and trichlormethiazide, ethacrynic acid and furosemide.^{3,4}

In Japan, SNMC has been used as a treatment for hepatitis for more than 30 years. Suzuki et al. reported that the levels of SGOT, SGPT and -GTP can be significantly reduced by administration of SNMC. In a double-blind multicenter study, serum SGOT levels have been shown to be significantly decreased in patients given 40 ml/day of SNMC for four weeks ($P < 0.001$). Furthermore, giving 100 ml/day of SNMC for eight weeks, reduced the SGOT value, and improved liver histology in patients with chronic hepatitis and liver cirrhosis so that the risk of developing liver carcinoma could be reduced.^{3,4}

Conclusion

Based on the results of the study, it was found that acute hepatitis patients most often occurred in boys, aged between 7-14 years and resided in the village. The most common clinical manifestations are anorexia, jaundice, and fever. The administration of

curcuma in combination with SNMC (Stronger Neo-Minophagen C) was able to significantly reduce the SGOT and SGPT values ($p < 0.001$).

Conflict Of Interest

The author stated there is no conflict of interest

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