



A CASE STUDY ON AUTOIMMUNE HEPATITIS WITH HAEMOLYTIC ANEMIA

B. Bindu Priyanka*, B. Aswani, D. Guru Prasanna, J. Salma Sulthana

Department of Pharmacy Practice, Santhiram College of Pharmacy, Nandyal,
Kurnool, Andhra Pradesh, India, Pincode-518501.

*Corresponding author E-mail: bindupriya1091@gmail.com

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ABSTRACT

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Autoimmune hepatitis is also called as lupoid hepatitis. It is a chronic autoimmune disease of the liver where the liver cells to be inflamed due to our own body immune system. These are mainly classified into two types based on the action of antibodies on the liver they are type-I and type-II. Among these two types type-I is more common than type-II. The prevalence of autoimmune hepatitis in india is rare and unclear. Only five cases are reported for autoimmune hepatitis. It occurs in both males and females but it is more common in females when compared to males. The common symptoms of the autoimmune hepatitis include fatigue, muscle aches, abdominal discomfort and abdominal distension, fever, jaundice, enlarged liver, loss of appetite, nausea and vomiting. If the autoimmune hepatitis is untreated leads to scarring of liver tissues, this condition is commonly called as cirrhosis, but this condition leads to severe complications includes esophageal varices, Ascities, liver failure, liver cancer. The laboratory procedures followed for the diagnosis of autoimmune hepatitis includes blood test, liver function test and ultrasound of liver and liver biopsy. The treatment guidelines follow to treat autoimmune hepatitis by corticosteroid administration along with or without azathioprine. In our present case study a female patient of age 36years admitted in general medicine department of AMC ward in Santhiram general and medical hospital with a duration of four days with chief complaints of abdominal discomfort, abdominal distension since 2 months which was gradually progressive in nature associated with shortness of breath on lying down position, fever since 2months associated with chills and riggor, pain in the left upper quadrant of abdomen since 7 days, decreased appetite. Based on the laboratory and clinical investigations of the patient the physician diagnose as autoimmune hepatitis with haemolytic anemia. The therapy follows for the patient includes corticosteroid drug dexamethasone to reduce the inflammation and suppress the immune system and other drugs are used for the symptomatic relief of the patient. The response of the treatment by the patient is good hence the patient is discharged with supportive therapy by corticosteroid drug dexamethasone.

INTRODUCTION:

Hepatitis is an inflammation of the liver which is commonly caused by the 5 different types of hepatitis viruses A, B, C, D and E. Autoimmune hepatitis (AIH) is also called as lupoid hepatitis which is a

chronic autoimmune disease of the liver. In autoimmune hepatitis our own immune system attacks liver cells causing the liver to be inflamed. This autoimmune hepatitis is classified into two types which include type-

I and type-II⁽¹⁾. Type-I autoimmune hepatitis is known as classic autoimmune hepatitis characterized by circulating antinuclear antibodies and/or anti-smooth muscle antibodies and it is common in adults and adolescents. Type-II autoimmune hepatitis is caused by the presence of the antibodies to liver/kidney microsomes (ALMN-1) and/or to a liver cytosol antigen (ALC-1) and it is common in girls and young woman. The Prevalence of autoimmune hepatitis in India is less and unclear⁽²⁾. The annual incidence of the AIH is 0.34-0.42 per 1 lakh population and only five cases were reported in India^(3,4). The common symptoms include initially fever, hepatic tenderness and jaundice, later the fatigue, upper abdominal discomfort, loss of appetite, autoimmune hemolytic anemia, thrombocytopenia purpura. The common diagnostic procedures includes liver function tests, rule out of viral hepatitis, determine the type of AIH^(5,6). Treatment Guidelines followed for the autoimmune hepatitis is immunosuppressive therapy with either glucocorticoids or azathioprine for symptomatic relief.

CASE REPORT:

A 36 years old female patient was admitted in general medicine department of AMC ward in Santhiram General Hospital with chief complaints of fever since two months which was on and off with intermittent chills and rigor, abdominal pain since 2 months. The present illness was abdominal distension which was gradually progressed in association with shortness of breath on lying down position, pain in the left upper quadrant of abdomen since 7 days along with abdominal discomfort. Based on the history of previous illness patient has no similar complaints and not known case of hypertension, diabetes mellitus. On examination of personal history the patient had normal sleep and bowel, bladder profiles and appetite was decreased. On general examination of the patient the pulse rate was 82beats/min, blood pressure was 100/70 mm of Hg, temperature was 98^of, SPO2 was 96% with room air, pallor is present, icterus is present, bilateral pitting edema is present. On local examination of abdomen based on

inspection, palpitation, percussion and auscultation the result was found to be uniformly distended abdomen, umbilicus was everted, scars and sinuses was not found, no tenderness, no local rise of the temperature, hepatomegaly present, fluid thrill present, no shifting dullness, bowel sounds heard and no bruits. On laboratory examination the results was found to be normal RBS level (111mg/dl), elevated chlorides levels(110meq/l), decreased sodium levels(126meq/l), elevated liver function test of total bilirubin (3.9mg/dl), direct bilirubin (3.3mg/dl), SGOT(61IU/l), alkaline phosphate(359IU/l) with decreased SGPT(15IU/l), total proteins(5.2g/dl) and normal serum albumin(2.8g/dl),decreased haemoglobin level (6.2g/dl),decreased RBC count(1.7million/cmm), elevated total WBC(36,000/cmm),elevated neutrophils (84%), elevated ESR level(25mm/hr), decreased PCV(18%), slightly elevated MCH (38), elevated platelet count(6,45,000), slightly elevate of prothrombin time(17sec), decreased INR(1.2), elevated serum creatinine (1.16mg/dl). Ultrasound examination of abdomen revealed the hepatomegaly with grade-I fatty liver associated with irregular surface, moderate ascities, mild splenomegaly. The morphology of RBC shows anisopoikilocytosis with predominant macrocytes, few normocytic, normochromic cells, and few stomatocytes. Based on the subjective and objective evidences of the patient, the present condition was diagnosed as autoimmune hepatitis with hemolytic anemia. Laboratory profile of the patient was described in the Table. No.1. The therapy followed for the patient was INJ. Dexamethasone 8mg TID, INJ. Vitamin B supplements (Optineuron) 1AMP in 100ml Normal saline OD, INJ Pantoprazole 40mg IV OD, INJ. Ondansetron 1AMP IV TID, INJ. L-Ornithine L-Aspartate 5AMP in 5% Dextrose OD, Tab. Ursodeoxycholic Acid 150mg TID, Advice packed Red Blood cell Transfusion, Syrup. Symlax (Liquid Paraffin, Agar, Phenolphthalein) 15ml HS OD, Tab. Folic Acid 5mg OD, INJ. Vitamin K 1AMP slow IV OD, 1 Normal saline 50ml/hr; INJ. Tramadol 1AMP slow IV

SOS, INJ. Furosemide 2cc slow IV is given before blood transfusion.

DISCUSSION

Autoimmune hepatitis is a chronic inflammatory disease of liver that occurs when the immune system attacks the liver cells. Autoimmune hepatitis was first described in 1951 as a chronic hepatitis of young woman with hyper gammaglobulinemia in the absence of cirrhosis which response well to adrencorticotropic therapy. Autoimmune hepatitis is also called as lupoid hepatitis. Individuals with Autoimmune Hepatitis often have no initial symptoms and the disease is detected by abnormal liver function tests. Anomalous presentation of human leucocyte antigen(HLA) class-II on the surface of liver cells possibly due to genetic predisposition of acute liver infection causes a cell mediated immune response against the body's own liver resulting in Autoimmune Hepatitis^(7,8). This abnormal immune response results in the inflammation of liver which can leads to further symptoms and complications such as fatigue and cirrhosis. The disease may occur at any age but it most often diagnosed in patients between the age of 40 and 50 years. The common initial symptoms include fatigue, muscle aches. Signs of acute inflammation including fever, jaundice and right upper quadrant abdominal pain. In our present study the patient was admitted with abdominal pain since 2 months and abdominal distension which was gradually progressive. Generally in Autoimmune Hepatitis upper quadrant abdominal pain with fever and jaundice was observed but in our present case there is a presence of pain in the left upper quadrant of abdomen along with abdominal discomfort, jaundice and fever. The diagnosis of autoimmune hepatitis is best achieved with a combination of clinical, laboratory and histological findings^(9,10). A number of specific antibodies in the blood indicate the increased immunoglobulin G levels. However the diagnosis of the autoimmune hepatitis always require a liver biopsy but in our case the diagnosis was confirmed by clinical and

laboratory findings. In both clinical and laboratory findings there was a evidence for the presence of autoimmune hepatitis which was described above. Treatment for autoimmune hepatitis includes medication to suppress or slow down an overactive of immune system. Treatment may also include a liver transplantation. Treatment works best when autoimmune hepatitis is diagnosed early, people with autoimmune hepatitis generally response to standard treatment and the disease can be controlled in most cases. Long term response to treatment can stop the disease from getting worst and may even reverse some damage to the liver. People with autoimmune hepatitis who have no symptoms or a mild form of the disease may or may not need to take medication. A health care provider will determine if a person need treatment. Treatment for autoimmune hepatitis involves the restriction of immunosuppressive glucocorticoids such as prednisone with or without azathioprine may be given or any other immunosuppressive. Liver transplantation may be required if the patients do not response to drug therapy or when patients present with fulminant liver failure. In the present study the drugs dexamethasone is a corticosteroid used to treat the inflammation and to improve the immune system, vitamin B supplements are used to make healthy red blood cell in the body and these are used to treat anemia. Normal saline is used in balancing electrolytes and to provide energy. Pantoprazole is proton pump inhibitor used in decreasing the acidic levels. Ondansetron is an anti-emetic drug used to reduce the episodes of vomiting. L-Ornithine L-Aspartate is an amino acid supplement used to treat jaundice and hepatitis. Dextrose is electrolyte and nutrition supplement. Ursodeoxycholic acid is a hepatoprotective drug used to treat primary biliary cirrhosis. The syrup Symlax contains active ingredients of liquid paraffin, Agar, phenolphthalein used to treat temporary relief of constipation by lubricating and softening the stools. A folic acid supplement is used to produce and maintain the new Red blood cells. Vitamin K is used to treat the haematological profile.

Table. No. 1. Laboratory Examinations

Parameter	Test value	Normal value
RBS	111mg/dl	<200mg/dl
Sodium	126mEq/L ↓	135-145mEq/L
Chlorides	110mEq/L ↑	95-105mEq/L
Potassium	4.1mEq/L	3.5-5.0mEq/l
Total bilirubin	3.9mg/dl ↑	0.2-1.0mg/dl
Direct bilirubin	3.3mg/dl ↑	<0.4mg/dl
SGOT	61IU/L ↑	5-40IU/L
SGPT	15IU/L	5-45IU/L
Alkaline phosphatase	359IU/l ↑	40-140IU/L
Total proteins	5.2g/dl ↓	6-8g/dl
Serum albumin	2.8g/dl ↓	3-5g/dl
Haemoglobin	6.2g/dl ↓	12-15g/dl
Total WBC	36,000/cmm ↑	5,000-10,00/mm ³
Polymorphs	84% ↑	60-70%
Lymphocytes	10% ↓	20-30%
Eosinophils	04%	1-3%
Monocytes	02% ↓	3-8%
Basophills	00%	0.3-0.5%
ESR	25mm/hr ↑	<20mm/hr
T.RBC	1.7million ↓	3.6-5.0million/mm ³
PCV	18% ↓	38-42%
MCV	104FL	<85FL
MCH	38pg ↑	27-33pg/cell
MCHC	36	33-36g/dl
Platelet count	6,45,000 ↑	1,50,000-4,50,000
Prothrombin time	17sec ↑	11-16sec
INR	1.2 ↓	2.0-3.5
Serum calcium	8.6mg/dl	8.5-11mg/dl
Serum creatinine	1.16mg/dl ↑	0.5-0.9mg/dl
Urine colour	Pale yellow	-
Pus cells	6-8hpf ↑	0-4hpf
Epithelial cells	8-10hpf ↑	0-4hpf

Furosemide is used to prevent the blood transfusion complications by preventing the water retention. Packed Red Blood cell transfusion is used to treat anemia by improving the hemoglobin levels. Tramadol is an opioid analgesic used to treat pain. In our present case the patient condition was maintained according to the treatment guidelines. Glucocorticoids may cause some severe side effects like diabetes, weight gain, anxiety and confusion. In our present study we didn't observe any side effects of the treatment. Medications that suppress the immune system may leads to various forms of cancer, in our present case the patient was discharged with maintenance therapy of

glucocorticoids. It requires close monitoring for the side effects but due to lack of follow-up of the patient we are unable to monitor the side effects.

CONCLUSION

Autoimmune hepatitis is a rare and severe condition which may leads to increase both mortality and morbidity. Autoimmune hepatitis causes severe complications like haemolytic disorders which may adversely affect the quality of life of the patient. So there is a need to create awareness regarding autoimmune hepatitis and its complications.

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