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A RARE CASE OF GILOY (HERBAL PRODUCT) INDUCED LIVER INJURY: A CASE REVIEW

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ABSTRACT

Background: Ayurveda is one of the oldest healing systems which have mainly emerged from India. Herbs with medicinal properties are an essential part of Ayurveda. Some of these herbs are said to be hepatotoxic. These Alternative Medicines (AM) form the major chunk of the drug induced liver injury (DILI) cases in Asia, where Ayurveda medicine is more prevalent but the most overlooked content by the physicians due to underexposure to effects of herbal medicine.

Case Details: A 55 year old female, who is a housewife with no comorbidities presented to the hospital with the complaints of yellowish discoloration of sclera, abdominal distension, vomiting and bilateral pedal edema from the last 2 months. She has been taking an herbal medicine containing giloy juice (*Tinospora cordifolia*) as an immunity booster for covid-19 prevention from the last 1 year. She denied the use of any modern medicine which may cause hepatotoxicity since last one year. She has no history of consumption of alcohol.

Discussion: The purpose of presenting the case is to sensitize physicians as a whole to modern medicine people regarding the toxicity of herbal medication.

Conclusion: We are describing one such case of liver failure caused due to the consumption of a Herbal medication containing *Tinospora cordifolia* (Giloy).

Keywords: Ayurveda, covid 19, Giloy, hepatotoxic, *Tinospora cordifolia*

INTRODUCTION:

Ayurveda is one of the oldest healing systems which have mainly emerged from India. Herbs with medicinal properties are an essential part of Ayurveda. Some of these herbs are said to be hepatotoxic. These Alternative Medicines (AM) form the major chunk of the drug induced liver injury (DILI) cases in Asia, where Ayurveda medicine is more prevalent but the most overlooked content by the physicians due to underexposure to effects of herbal medicine.

Case Details:

A 55 year old female, who is a housewife with no comorbidities presented to the hospital with the complaints of yellowish discoloration of sclera, abdominal distension, vomiting and bilateral pedal edema from the last 2 months. She has been taking an herbal medicine containing giloy juice (*Tinospora cordifolia*) as an immunity booster for covid-19 prevention from the last 1 year. She denied the use of any modern medicine which may cause hepatotoxicity since last one year. She has no history of consumption of alcohol.

Her Physical examination was remarkable for icterus and bilateral pedal edema. Examination of the abdomen revealed a distended abdomen with a positive shifting dullness, suggesting ascites and examination

of chest revealed bilateral fine crepitations in infrascapular region. Initial lab investigations showed a normal blood picture, renal function test, electrolytes, urine analysis, ANA Profile, Iron Profile, Ceruloplasmin, but the liver function test was deranged with a total Bilirubin 33.2mg/dl, Direct Bilirubin - 21.9mg/dl, SGOT- 200.6 IU/L, SGPT-68.9 IU/L, ALP-181 IU/L, ALBUMIN-2.6 gm/dl, GLOBULIN-3.1 gm/dl. Prothrombin time is 18.8 sec and INR is 1.69. Viral markers were negative. Ultrasound showed increased echogenicity of liver with ascites. She was then asked to stop the ingestion of giloy (*Tinospora cordifolia*) and was started on conservative management, albumin and vit K along with ursodeoxycholic acid and other supportive therapy. Paracentesis was done and the ascitic fluid was sent for analysis in which there were no positive findings in gram stain, AFB, Culture and sensitivity, ADA and cytology and biochemistry and showed a High SAAG picture. Then a splenoportal axis Doppler study was done which shows increased echogenicity of liver with hepatofugal flow in main PV and increased Pulsatility Index (PI) of hepatic artery.

Repeat LFT showed decreased bilirubin and aminotransferases and also decreased PT.

Within 10 days of stopping the herbal medicine and conservative management, the Lab values have improved and the patient has improved clinically too.

DISCUSSION:

Alternative Medicine consists of large group of practices which includes multiple dietary supplements and herbs [1]. Many people use herbal products over the counter without the physician's advice due to the assumption that they are free of unwanted side effects, but in reality these products have biological activity that may cause severe hepatotoxicity or may interact with other drugs or even react with other herbs taken by the patient [2-4]. Thousands of medicinal herbs and drugs have been implicated in the causation of drug induced liver injury and this list is continuing to grow. Patients are often reluctant to give the history of taking Ayurveda or herbal medications hence this should always be taken into consideration.

The liver injury may range from a simple asymptomatic patient having abnormal liver function test to Acute liver failure requiring transplantation or death [5, 6]. The most typical presentation is an acute hepatocellular injury with elevated aminotransferases and bilirubin and jaundice. It can also present as acute or chronic hepatitis, liver failure with decreased synthetic function, coagulopathy

and encephalopathy or with features of cirrhosis.

CONCLUSION:

Our case report documented the herbal or Ayurveda products like Gilloy (*Tinospora cordifolia*) Can cause Acute fulminant hepatic failure or severe drug induced liver injury which may be overlooked by the physicians due to lack of data on this drug. This would facilitate quicker recognition of offending agent and safer use of over the counter products or herbal products by patients. All Ayurveda and homeopathic medicine should undergo clinical trial and post marketing surveillance to ensure safety and side effects.

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