

A rare case of acute hepatitis caused by Komboucha tea

C. Steger, T. Vandamme, P.H. Steger

Sint-Vincentiusziekenhuis, Antwerpen, Belgium.

To the Editor,

HILI or “herb-induced” liver injury is a rare cause of acute liver injury related to traditional Asian medicine and herb-based products. Similar to previously published case report by Vanstraelen *et al.* (1) we present a case of a 55-year-old man with complaints of fatigue since two months, and complaints of nausea, frequent vomiting and a darkening of his urine since one week. He reported taking no other medication than occasionally cetirizine 10 mg. In the last 6 months he denied taking any other medication. Prior history of hay fever was known. Patient reported drinking one or two glasses of wine since several years and recently started drinking several glasses of Komboucha tea daily.

At presentation his parameters were stable and on sight mild jaundice was noticed. Further clinical investigation showed no other abnormalities with normal abdominal investigation.

Drug-induced hepatotoxicity could be excluded since the patient’s only medication intake was cetirizine, which causes hepatic toxicity only in specific, rare cases (2).

Patient was advised to stop drinking Komboucha tea and alcohol. Re-evaluation after 1 and 6 months showed disappearance of the complaints with normalisation of most of the blood results after six months (Table 1).

The above-mentioned patient was diagnosed with acute toxic hepatitis caused by Komboucha tea. Similar to the case report by Vanstraelen *et al.* (1) there was a chronic association between the drinking of Komboucha tea and the start of the symptoms. Given the mild clinical presentation and quick recuperation after cessation, no biopsy was made and so the diagnosis remains uncertain. The disappearance of the symptoms after cessation of drinking Komboucha tea favours the above diagnosis, but other additive factors such as alcohol can’t be fully excluded.

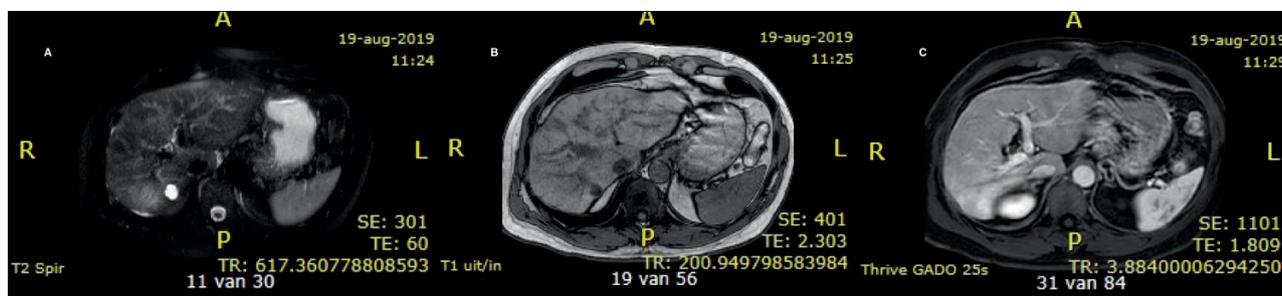


Figure 1.

Laboratory findings showed the presence of mixed elevated values of liver enzymes with normal value of lipase (Table 1). Further investigation consisting of abdominal ultrasound and MRI scan with MRCP-sequence showed an inhomogeneous right liver lobe, but no signs of steatosis or cirrhosis, no liver or pancreatic masses and no sign of cholestatic injury or obstruction (Figure 1).

Biochemical testing to eliminate viral and autoimmune hepatitis was conducted and showed no abnormalities. Malignancy was excluded by the absence of abnormalities on diagnostic imaging and the normal values of cancer biomarkers. Further diagnostic work up revealed no signs of underlying metabolic disease such as Wilson’s disease or hemochromatosis (Table 2). Screening for metabolic syndrome was negative.

Following the gaining popularity of traditional Asian lifestyle and the more frequent consumption of products like *camellia sinensis*, which is the main and most likely hepatotoxic, ingredient in Komboucha tea, more knowledge and vigilance about HILI is needed in our day to day practice, certainly when there is a combined use with known hepatotoxic products such as alcohol (3).

Conflict of interest

None to declare.

Correspondence to : Charlotte Steger, Van Putlei 64, bus 8, 2000 Antwerpen, Belgium. Phone : +32 0492085588. Fax : +32 (0)32852885. E-mail : charlottesteger@hotmail.com

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Table 1. — Laboratory results

	19/08/2019	04/09/2019	27/01/2020	Reference value
hematocrit	45,3	43,5	42,8	39-51%
MCV	87,6	90,6	93,9	79,1-99,0 fl
MCH	31,1	31,0	31,8	26,7-34,5 pg
MCHC	35,5	34,3	33,9	33,2-36,9g/dl
leucocytes	4,5	4,5	6,98	3,30-9,30 x 1000/mm ³
lymphocytes	22,1	38,4	38,0	17,6-47,6%
monocytes	14,3	12,6	9,7	4,0-11,3%
thrombocytes	94	74	123	131-360 x 1000/mm ³
APTT	-	36,4	-	24,8-34,4 sec
PT	-	82	-	70-150%
INR	-	1,25	-	0,80-1,20
urea	26	22	20	18-55 mg/dl
creatinine	0,90	0,90	0,81	0,73-1,18 mg/dl
eGFR	> 60	> 60	> 60	> 60 ml/min/1,73mm ²
uric acid	4,7	4,2	5,1	3,5-6,0 mg/dl
sodium	140	-	-	136-145 mmol/L
potassium	4,0	-	-	3,5-5,1 mmol/L
chloride	107	-	-	98-107 mmol/L
bicarbonate	25	-	-	22-29 mmol/L
calcium	2,36	-	-	2,10-2,52 mmol/L
phosphate	0,78	-	-	0,71-1,52 mmol/L
magnesium	0,84	-	-	0,66-1,07 mmol/L
iron	240	218	134	65-175 mg/dl
transferrin	2,01	1,78	2,29	1,74-3,64 g/L
transferrin saturation	85	87	41	16-45%
ferritin	10310	3363	279	22-275 µg/L
cholesterol	263	-	204	mg/dl
triglycerides	190	-	-	mg/dl
bilirubin total	3,9	2,8	0,6	0,3-1,2 mg/dl
bilirubin direct	2,2	1,5	0,3	0,0-0,5 mg/dl
bilirubin indirect	1,7	1,3	0,3	< 0,7 mg/dl
lactate	2,14	-	-	0,5-2,20 mmol/L
AST	604	247	33	< 34 U/L
ALT	1070	394	44	< 55 U/L
Y-gt	843	681	147	11-59 U/L
ALP	171	146	82	43-160 IU/L
LDH	-	354	-	125-220 U/L
lipase	48	34	-	< 78 U/L
CRP	3	-	-	< 5 mg/dl

MCV : mean corpuscular volume, MCH : mean corpuscular hemoglobin, MCHC : mean corpuscular hemoglobin concentration, APTT : activated partial thromboplastin time, PT : prothrombin time, INR : international normalized ratio, eGFR : estimated glomerular filtration rate, AST : aspartate aminotransferase, ALT : alanine aminotransferase, Y-gt : gamma-glutamyl transpeptidase, ALP : Alkaline phosphatase, LDH : Lactate dehydrogenase, CRP : C-reactive protein.

Table 2. — Results etiological investigation

	Result	Reference value
IGA total	6,03	0,63-4,84 g/L
IGG total	11,09	5,40-18,22 g/L
IGM total	1,97	0,22-2,40 g/L
ANF	negative	-
AMA	negative	-
Anti-LKM antibody	negative	-
Anti-SMC antibody	negative	-
Toxoplasmosis IGG	negative	-
Toxoplasmosis IGM	negative	-
HIV	negative	-
Hepatitis A IGM	negative	-
Hepatitis B surface antibodies	negative	-
Hepatitis C antibodies	negative	-
Hepatitis E IGM screening	negative	-
Mononucleosis screening	negative	-
EBV IGG	positive (15,45 index)	-
EBV IGM	negative	-
CMV IGG	positive (64,4 U/ml)	-
CMV IGM	negative	-
CEA	3,8	0,0-5,0 µg/L
CA 19.9	13,9	0,0-37,0 KU/L
AFP	35,73	< 8,87 µg/L
copper	74	80-140 mg/dl
ceruloplasmin	0,23	0,22-0,58 g/L

IGA : immunoglobulin A, IGG : immunoglobulin B, IGM : immunoglobulin M, ANF : antinuclear factor, AMA : anti-mitochondrial antibodies, Anti-LKM antibody : anti-liver-kidney microsomal antibody, Anti-SMC antibody : Anti-smooth muscle antibodies, PCR : Polymerase chain reaction, EBV : Epstein-Barr-virus, CMV : Cytomegalovirus, CEA : carcinoembryonic antigen, CA 19.9 : cancer antigen 19-9, AFP : alpha-fetoprotein.