Acute Hepatitis Associated with The Use of Herbal Tea (Fennel and Cumin)

Bitkisel Çay Kullanımı ile İlişkili Akut Hepatit (Rezene ve Kimyon)

Bitkisel Çay ve Akut Hepatit / Herbal Tea and Acute Hepatitis

[1]Suat Zengin, [1]Mehmet Murat Oktay, [1]Murat Kamalak, [1]Behcet Al, [1]Cuma Yildirim, [2]Hasan Büyükaslan
[1]Emergency Department of Medicine Faculty of Gaziantep University, Gaziantep,
[2]Emergency Department of Middle East Medical Center, Şanlıurfa, Turkey

Özet

Bitkisel ilaçlar, geleneksel ilaçlar ile hayal kırıklığının bir sonucu olarak dünya genelinde giderek daha popüler hale gelmektedir. Toplum onları genellikle zararsız olarak kabul etmektedir. Ancak bu ürünler veya bunların metabolitleri karaciğer hasarı gibi bazı yan etkilere neden olabilir. Bu çalışmada bitkisel çay içimine bağlı akut hepatit gelişen iki hasta sunulmuştur. Yirmi altı ve otuz yaşında iki kadın; mide bulantısı, kusma, iştahsızlık ve halsizlik şikâyeti ile kliniğimize başvurdu. Serum alanin aminotransferaz ve aspartat aminotransferaz düzeyleri artmıştı. Viral hepatit ve otoimmün hastalıklar için tüm serolojik testleri negatif bulundu. Onlar süt yapımını artırmak için üç dört hafta boyunca her gün rezene ve kimyon içeren bir bitkisel çay içmişlerdi. Bitkisel çayın kesilmesinden dört-beş hafta sonra karaciğer enzimleri normale döndü. Bizim bilgimize göre bu muhtemelen, rezene ve kimyon içeren bir bitki çayı kullanımı ile ilgili ilk hepatit rapordur. Bu çalışma, rezene ve kimyon içeren bitkisel çayın akut hepatitin diğer nedenleri ile klinik olarak karışabilen hepatotoksisiteye sebep olabileceğini göstermektedir. Klinisyenler kolayca tanısı konulamayan akut hepatit olgusu ile karşı karşıya kalabilirler ve bitkisel ilaç kullanımı konusunda hastayı sorgulamaları gerekmektedir.

Anahtar Kelimeler

Hepatotoksisite; Bitkisel Çay; Rezene; Kimyon

Abstract

Herbal remedies have become increasingly popular throughout the globe as a result of disappointment with conventional medicines. The public often regards them as harmless. However, some of these products or their metabolites can cause adverse effects such as liver damage. In this study, two patients who developed acute hepatitis due to consuming herbal tea are presented. Twenty-six and thirty-year-old two women were admitted to our department with symptoms of nausea, vomiting, anorexia and weakness. Serum alanine aminotransferase and aspartate aminotransferase levels were increased; all serological tests for viral hepatitis and autoimmune disorders were negative. They had consumed an herbal tea containing fennel and cumin to increase lactation everyday for three-four weeks. Discontinuation of the herbal tea resulted in normalization of liver enzymes four-five weeks later. To the best of our knowledge, this is the first report of hepatitis possibly related to use of an herbal tea containing fennel and cumin. This study suggests that herbal tea containing fennel and cumin can cause hepatotoxicity, which could be clinically confused with other causes of acute hepatitis. Clinicians may face with a case of acute hepatitis that is not readily diagnosed, and should question patients about herbal remedy use.

Keywords

Hepatotoxicity; Herbal Remedy; Fennel; Cumin

DOI: 10.4328/JCAM.1190 Received: 03.07.2012 Accepted: 05.08.2012 Printed: 01.11.2015 J Clin Anal Med 2015;6(6): 841-843
Corresponding Author: Suat Zengin, Emergency Department of Medicine Faculty, Gaziantep University, Gaziantep, Turkey.
T.: +90 3423606060/77122 GSM: +905336408361 F.: +90 3423602244 E-Mail: zengins76@gmail.com

Introduction

Herbal remedies are widely and routinely used worldwide. As they are generally commercially available without medical prescription and are known as 'natural products', they are generally believed to be harmless. Hepatitis due to herbal remedies has previously been infrequently reported. However, recently hepatitis associated with herbal remedies has been increasingly reported in literature and new agents have been continuously added to the list [1-3]. Nevertheless, pathogenic mechanisms are not well defined and the true incidence is probably underestimated. Cumin (Cuminum Cyminum) has been used for treatment of toothache, dyspepsia, diarrhea, epilepsy and jaundice [4]. Fennel (Foeniculum Vulgare) and its herbal drug preparations have been used for treatment of many gastrointestinal and respiratory disorders [5]. This case report describes two breast-feeding women that developed acute hepatitis due to drinking an herbal tea containing fennel and cumin. This is the first report of hepatitis related to use of a mixture containing both cumin and fennel.

Case Report 1

A 26-year-old woman was admitted to our department with symptoms of nausea, vomiting, anorexia, weakness and abdominal discomfort. The physical examination was unremarkable. Her medical history was negative for hepatic and metabolic disorders (such as obesity, diabetes mellitus, atopy). She denied alcohol or hepatotoxic orally or intravenously drug abuse (e.g. nonsteroidal anti-inflammatory drugs), recent foreign travels, sexual risk factors and blood product transfusions. She said that she delivered 40 days ago. The patient also mentioned that for the past 30 days she consumed daily 2-3 cups of herbal tea containing fennel and cumin to increase lactation and relieve abdominal discomfort.

The initial laboratory values revealed: serum aspartate aminotransferase (AST) 467 IU/l (reference range [RR] 5–34 IU/l), alanine aminotransferase (ALT) 608 IU/l (RR 3–55 IU/l), □-glutamyl transferase (GGT) 160 IU/l (RR 9–36 IU/l), alkaline phosphatase (ALP) 478 IU/l (RR 40–150 IU/l), total bilirubin 2.29 mg/dl (RR 0.2–1.2 mg/dl) and conjugated bilirubin 0.85 mg/dl (RR 0.0–0.5 mg/dl). Coagulation studies and other laboratory tests, including a complete blood count, serum urea nitrogen, creatinine, glucose, electrolytes, total protein and albumin were normal. Results of serological tests for viral hepatitis A, B and C, Cytomegalovirus, Epstein-Barr virus, types 1 and 2 herpes simplex viruses were negative, as well as serological tests for autoimmune disorders. Moreover, serum ceruloplasmin and α1-antitrypsin were normal. Abdominal ultrasonography showed mild hepatic steatosis and a normal biliary tract.

The herbal tea was stopped after admission and the patient was treated conservatively. Frequent assessment of the liver function was performed. The patient recovered clinically over the next five weeks. The patient's liver function tests returned to normal five weeks later.

Case Report 2

A 30-year-old woman was admitted to our department with symptoms of nausea, vomiting, anorexia and weakness. The physical examination was unremarkable. Her medical history was negative for hepatic and metabolic disorders (such as obesity, diabetes mellitus, atopy). She denied alcohol or hepatotoxic orally or intravenously drug abuse (e.g. nonsteroidal anti-inflammatory drugs), recent foreign travels, sexual risk factors and blood product transfusions. She said that she delivered 25 days ago. The patient also mentioned that during the past 20 days she consumed daily 1-2 cups of herbal tea containing fennel and cumin to increase lactation.

On admission, the laboratory results were: AST 337 UI/l (RR 5–34 UI/l), ALT 445 UI/l (RR 3–55 UI/l), GGT 349 UI/l (RR 9–36 UI/l), ALP 264 UI/l (RR 40–150 UI/l), total bilirubin 0.45 mg/dl (RR 0.2– 1.2 mg/dl) and conjugated bilirubin 0.22 mg/dl (RR 0.0–0.5 mg/dl). Coagulation studies and other laboratory tests, including a complete blood count, serum urea nitrogen, creatinine, glucose, electrolytes, total protein and albumin were normal. Results of serological tests for viral hepatitis A, B and C, Cytomegalovirus, Epstein-Barr virus, types 1 and 2 herpes simplex viruses were negative, as well as serological tests for autoimmune disorders. Moreover, serum ceruloplasmin and α1-antitrypsin were normal. Abdominal ultrasound and a computed tomography scan of the abdomen were both normal.

The herbal tea was discontinued upon admission and the patient was treated conservatively. Frequent assessment of the liver function was performed. Her liver function tests progressively decreased and returned to normal after four weeks and the patient completely recovered.

Discussion

Herbal remedies have been used worldwide to treat many different diseases for thousands of years [1-3]. Recently, herbal remedies have been widely advertised as harmless medication for a variety of ailments. Many patients consider herbal remedies as natural and harmless medications, and are turning toward the internet for information regarding their illness and are discovering the potential uses of herbal preparations. However, recently reported cases of hepatitis induced by herbal remedies [1-3] indicate that herbal remedies may not be entirely safe.

The liver is a key organ of metabolism, secretion and extraction. As for herbal remedies, the toxic ingredients and mechanisms of liver injury are not clearly known because of the complexity of herbal remedies and partial knowledge of their action mechanism. However, direct hepatotoxic effect, hypersensitivity and idiosyncratic reactions have been proposed [6;7]. It is often difficult to identify the exact toxic component of herbal remedies, since they contain multiple ingredients, individual components may not be pure substances and not all components may be listed.

The true incidence of herbal remedy induced hepatitis remains unknown because the diagnosis of toxicity induced by an herbal remedy is difficult since there are no specific tests or diagnostic criteria. Careful history taking, laboratory findings, and histopathology are used to diagnose toxicity induced by herbal remedies [5-7]. Careful history taking is crucial in order to obtain the correct diagnosis. However, such information is not always available. It has been shown that most patients who take herbs do not inform their physicians. Moreover, most physicians do not ask patients whether they have taken herbal remedies [7].

Fennel (in Turkish "Rezene") and cumin (in Turkish "Kimyon") are

natively found in the north and west regions of Turkey. They are cultivated for the herb as a spice (flavouring salads) and medicine in Turkey. Herbal tea containing fennel and cumin is consumed by women to increase lactation during the postpartum period. Until now there has been no documented case of hepatotoxicity due to herbal tea containing fennel and cumin. Although the mechanism of toxicity remains elusive, we think that it is probably due to idiosyncratic reactions or direct hepatotoxic effect. In the above mentioned cases, the diagnosis of hepatitis associated with herbal tea administration was based on a review of the patient's history, clinical findings, laboratory abnormalities, exclusion of other causes of acute hepatocellular necrosis, the time association between the administration of the herbal tea and onset of symptoms and the fact that, after discontinuation of the herb, the patient improved and progressively recovered completely [1-3;5;6].

Herbal remedy induced liver injury is a new found problem. The use of herbal remedies must be considered a possible etiology in the setting of clinical and/or biochemical manifestations of liver injury, especially now that alternative medicine and herbal treatments have growing appeal in many societies. The above-described cases suggest that herbal tea containing fennel and cumin may be a cause of hepatitis, clinically indistinguishable from hepatitis of other etiologies. Thus, it highlights the fact that some herbal remedies may not be as safe as they are widely considered. Physicians and health officials need to warn the public of the potential danger of herbal remedies and to consider herbal remedies in the differential diagnosis of unexplained hepatitis.

Competing interests

The authors declare that they have no competing interests.

References

1. Cardenas A, Restrepo JC, Sierra F, Correa G. Acute hepatitis due to shen-min: a herbal product derived from Polygonum multiflorum. J Clin Gastroenterol 2006;40(7):629-32.
2. Yang HN, Kim DJ, Kim YM, Kim BH, Sohn KM, Choi MJ et al. Aloe-induced toxic hepatitis . J Korean Med Sci 2010;25(3):492-5.
3. Starakis I, Siagris D, Leonidou L, Mazokopakis E, Tsamandas A, Karatza C. Hepatitis caused by the herbal remedy Teucrium polium L. Eur J Gastroenterol Hepatol 2006;18(6):681-3.
4. Nostro A, Cellini L, Di Bartolomeo S, Di Campli E, Grande R, Cannatelli MA et al. Antibacterial effect of plant extracts against Helicobacter pylori. Phytother Res 2005;19(3):198-202.
5. Ozbek H, Uğraş S, Dülger H, Bayram I, Tuncer I, Oztürk G et al. Hepatoprotective effect of Foeniculum vulgare essential oil. Fitoterapia 2003;74(3):317-9.
6. Woolf GM, Petrovic LM, Rojter SE, Wainwright S, Villamil FG, Katkow WN, et al. Acute hepatits associated with the Chinese herbal product Jin Bu Huan. Ann Intern Med 1994;15(10):729–35.
7. Chitturi S, Farrell GC. Herbal hepatotoxicity: an expanding but poorly defined problem. J of Gatroenterol and Hepatol 2000;15(10):1093–9.

How to cite this article:
Zengin S, Oktay MM, Kamalak M, Al B, Yildirim C, Büyükaslan H. Acute Hepatitis Associated with The Use of Herbal Tea (Fennel and Cumin). J Clin Anal Med 2015;6(6): 781-3.