



Hepatitis: a herbal remedy Germander

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To cite this article: Erkan Goksu, Taylan Kilic & Derya Yilmaz (2012) Hepatitis: a herbal remedy Germander, *Clinical Toxicology*, 50:2, 158-158, DOI: [10.3109/15563650.2011.647993](https://doi.org/10.3109/15563650.2011.647993)

To link to this article: <https://doi.org/10.3109/15563650.2011.647993>



Published online: 03 Feb 2012.



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LETTER TO THE EDITOR

Hepatitis: a herbal remedy Germander

To the Editor:

Consumption of herbal remedies has become prevalent throughout the world. Their consumption may sometimes cause adverse effects and serious complications. In case of liver injury, herbal medicine may not be considered as the etiologic agent. Several herbal medicines have been reported to have hepatotoxic effects.

A study showed that only 40% of people who use herbal medicines informed their primary care physicians.¹ Therefore, cases of herbal medicine toxicity may go unrecognized, and establishing a diagnosis of hepatotoxicity due to herbal remedy can be difficult.

Germander is an aromatic plant in the mint family and herbal teas prepared with the plant have been used traditionally as antipyretic, diuretic, choleric and for abdominal disorders and wounds.² Several cases of hepatitis associated with the use of Germander (*Teucrium chamaedrys*) have been reported.^{3,4} Here, we present a case of hepatitis due to the ingestion of Germander (*Teucrium chamaedrys*).

A previously healthy, 69-year old male presented to the Emergency department (ED) with a complaint of jaundice and malaise. The patient had no history of liver disease, blood transfusion, illicit drug use or alcohol abuse. He denied any recent ingestion of pharmaceuticals including paracetamol, mushroom and other known hepatotoxins. In his history, he was taking Germander (*Teucrium chamaedrys*) plant tea for 2 months for his hemorrhoidal complaints. After 2 months, he discontinued and after a month of discontinuation of Germander tea, he had noticed jaundice. Clinical examination revealed jaundice and right upper quadrant tenderness. Liver function tests revealed the following serum levels: total bilirubin 3.84 mg/dL (direct bilirubin 2.58 mg/dL), aspartate aminotransferase (AST) 1151 U/L (0–41 U/L), alanine aminotransferase (ALT) 1380 U/L (0–40 U/L) and alkaline phosphatase (ALP) 152 U/L (40–129 U/L). The prothrombin time was normal. Paracetamol blood level was <0.2 µg/mL. Results of serologic tests for hepatitis A, B and C were negative. Anti-smooth-muscle, antinuclear and anti-mitochondrial antibodies were negative. Serum seruloplasmin and alfa-1-antitrypsin were normal. Ultrasound of the liver and biliary tract was reported as normal. His vital signs were within normal limits. Liver function tests progressively returned to normal range within a month.

After ruling out other causes of hepatitis, we consider that Germander (*Teucrium chamaedrys*) provoked the disease. Toxic

effects caused by ingestion of Germander occur after 9 weeks of treatment on average and is characterized by jaundice and high ALT and AST levels. There is no relation between toxic effects and daily consumption or duration of treatment. It is reported that recovery usually occurs within 6 weeks–6 months after Germander ingestion is stopped.³ In our case, the disease was resolved within a month after discontinuing the intake of the herbal tea.

Germander's hepatotoxicity is mediated via its furano neoclerodane diterpenoids, mainly teucriin A. Activation of the furano ring by cytochrome P450 3A results in the formation of toxic reactive epoxides. It is likely that Germander-induced hepatitis may be due to both direct toxicity and secondary immune reactions, probably with a varying contribution of these two mechanisms in different patients.⁵

It is commonly assumed that herbal medicines are safe and harmless but physicians should be aware of these problems and herbal remedies should be questioned in the history of patients in which the cause of hepatitis remains unknown.

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Received 5 December 2011; accepted 5 December 2011.

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