

# 건강식품도 독성 간염을 일으킬 수 있는가?

## Do Natural Health Products Cause Toxic Hepatitis ?

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### Abstract

Medicinal herb - induced liver injury reported on the literature ranges from mild elevation of liver enzymes to fulminant liver failure and liver cirrhosis. Medicinal herbs are common ingredients of traditional Chinese herbs. The mechanisms of medicinal herb - induced liver injury are mainly intrinsic hepatotoxicity. In addition to the potential for hepatotoxicity, medicinal herbs frequently induce herb - drug interaction and herb - herb interaction and may affect its own efficacy and safety. Sometimes hepatotoxicity of medicinal herbs originates from the substances of illegal adulterations and contaminations rather than its own indigenous components. Moreover, individual susceptibility to toxic liver injury should be considered in every instance. Two big problems exist in the management of medicinal herbs - induced liver injury. Because the release of prescriptions is not obligatory in Korea, it is impossible to identify ingredients in case of medicinal herbs - induced liver injury. Misconception on the safety of medicinal herbs prevails throughout the country.

**Keywords :** Complementary and alternative medicine(CAM); Toxic hepatitis; Individual susceptibility; Adulteration

핵심용어 : , ,

(natural health products)

가 (1)

가

(2~8).

2004 1 31

“

”(9)

(10~12),

가

가

1.

	HAV	HBV	Drugs	Herb	HCV	Alcohol	Others & Unknown	Total
1998	28(20%)	19(14%)	21(15%)	16(12%)	7(5%)	26(19%)	20(15%)	137
1999	23(14%)	27(16%)	26(15%)	13(8%)	5(3%)	25(15%)	50(30%)	169
2000	18(12%)	15(10%)	23(15%)	21(14%)	4(3%)	37(24%)	38(24%)	156
2001	26(14%)	10(5%)	31(17%)	27(15%)	8(4%)	38(21%)	44(24%)	184
2002	22(21%)	9(9%)	10(10%)	21(20%)	4(4%)	14(13%)	25(24%)	105
Total	117(15.6%)	80(10.7%)	111(14.8%)	98(13.0%)	28(3.7%)	140(18.6%)	177(23.6%)	751

2.

가?

· , 가 2004 1 31 “ 가 ” 가가 가 . 가 (13). 32가 ( 가 , , , , , , 가 , , , , , , ) 가 1 3,777 2,675 70%가

1.

가 10~15% ( 1)(14) . 15%

3.

가

25~30%

25%



3.

( )

가

가 ( , , )

가

(가 )

( , , )

, , , ,

CYP3A4

cyclosporin

MRP2

CYP3A4

CYP

40%

50%

5.

가?

CYP

(26). CYP3A4

가

acetaminophen germander

가 St. John's wort

CYP3A4

20%

가

(27). , ,

(23).

, St.

John's wort Prothrombin

(28).

pennyroyal

pulegone

monoterpene

가

St. John's

CYP2E1, 1A2, 2C19

wort(Hypericum perforatum)

(29). ,

, hyperporin

CYP2E1

PXR(Pregnane X Receptor)

(24) CYP3A4

. CYP3A4

P - gp(MDR1)

가

(25).

cyclosporin A

가 가

가

St. John's wort

bergamottin

CYP3A4

citrus psoralens (30)		4.		:
MDR1				
CYP3A4		(10,000 1 )		
digoxin				
digoxin		>	>	
가		48 ~	2~10	
가				
가		12~72		
가				
가		< 10%	20~70%	
가 -		minor cell type	dominant cell type	
가				
가		가		

6.

가

(Intrinsic

hepatotoxicity) (idiosyncrasy)

(xenobiotics)

(individual susceptibility)

(immune mediated injury) ”

( 4).

가

가 (31).

50

가

가 . 가 ,  
가 . 가  
가  
가  
가  
acetaminophen 가  
가  
(32). bromobenzene ,  
. Bromobenzene  
CYP 가 가  
epoxide가 (HBC)  
epoxide glutathione  
mercapturic acid bromophenol 가 . 가  
dihydrodiol 가  
epoxide 가  
phenobarbital  
가 epo-  
xide가 glu- 가 , 가  
tathione bronobenzene 가  
epoxide fenflu-  
가 3 - Methylcholanthrene ramine  
bromobenzene  
mercapturic acid dihydrodiol  
가 가  
(33).  
가 가  
가  
7.  
가

가 , 가  
가 .  
가  
가  
(Causality Assessment Method)  
(Causality Assessment Method)  
,  
.  
가 .  
가  
가  
가 .  
가  
“ (pharmacovigilance system) ”  
,  
가  
가 .

2004 1 31

가



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