

신경계 부작용을 보이는 생약재

Neurotoxicity of Herbal Medicine

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Abstract

Herbal medicines have been used for thousands of years, and herb preparations are commercially available for the folk remedies or for the promotion of health. In contrast to chemical drugs, herbs are regarded to be non-toxic and safe, because of their natural origin. But accumulating clinical data claim the toxicity of herbal medicine. They can cause adverse effects through (1) toxicity of the herb itself or bioactivation of its metabolites, (2) interaction with prescribed drugs, and (3) heavy metals contaminated in the herbal products. Recent studies have disclosed various neurologic side effects of herbal medicine, including cerebrovascular accident, convulsion, encephalopathy, hallucination, and psychosis. In addition, some herbs interact with the neurologic therapeutic drugs, such as anticoagulants and antiepileptic drugs, leading to failure to control the patients' diseases. Also, there is growing evidence that herbal medicine products contain potentially harmful levels of lead, mercury and arsenic, all of which have neurotoxicity. Systematic validation of the potency and toxicity of herbal medicines as well as screening of toxic heavy metal content should be warranted.

Keywords : Herbal medicine; Neurotoxicity; Drug interaction; Heavy metals

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1.

Ephedra alkaloid

가 (dystonia)
 . FDA ephedra가 (6). ,
 43 (tremor)
 18% , .
 10 , 7
 (2). 3.
 가 , ,
 ephedra 가 (7).
 가 . 가
 , , ,
 aconitine alkaloid 가 가
 , ephedrine alkaloid .
 phenylpropanolamine(PPA)가 ,
 가 aconitine ,
 chloroform
 가 (8).
 가 (feverfew)
 ,
 가 (3). , ,
 가 (3).
 가 , 가
 , (Reynoutria elliptica), (Magnolia officinalis), (Amomum tsao - ko)가 Methylpyrodixine B6
 (5), .
 , , , , (4)
 .
 2. 4.
 (Salvia miltiorrhiza) (Datura), (Hyoscyamus),
 (scopolia japonica) tropane alkaloid , atropine, scopo-

lamine 가 (13)

(9).

가 matrine

(10).

myristicin

atropine

goldenseal (*Hydrastis cana-*

densis) pulegone 가

가 .

(wormwood; (14).

Thujone) 가 가

가 absin-

the . 가, warfarin INR 가

absinthe 가 (Danshen;

가 Salvia miltiorrhiza), (Dong quai; Angelica

sinensis), (Garlic; *Allium sativum*),

Kava *Piper methysticum* , (Ginko; *Ginko biloba*), (Papaya; *Carcia*

benzodiazepine papaya), (horse chestnut), 가

(omega - 3 oil), war-

(11). FDA 2002 kava 가 farin (Ginseng;

(12). Panax spp) (15, 16).

, carbamazepine, phenytoin, phenobarbital

5. (3).

(*Licorice*) 가 (Betel nut; *Areca catechu*) cholin-

가 glycyrrhizin ergic alkaloid fluphenazine procyclidine

mineralocorticoid 가

(17).
(St. John's wort) ,
가 , monoamine - oxidase (Ayurveda)
(SSRI), ,
(20, 21).
(18).
MAOI , 가
MAOI hypericin
10 가 .
(3).
(evening primrose oil) 가 ,
가 가 .
가 ,
gamolenic acid phenobarbi-
tal phenytoin (22).
(3). ,
,
acetamino-
phen, caffeine, carbamazepine, phenytoin, valproic
acid, diazepam, hydrocortisone, methylsalicylate,
phenylbutazone .
가 가
23.7% 가
(19). 가
,
가 (Mees' line)
.

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