Ancient Science of Life Vol No. 17 (2), October 1997 pages 111 - 113

STUDIES ON SOME RECOMMENDED AYURVEDIC HERBS FOR CONTACT DERMATITIS

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Received: 3 May, 1997 **Accepted: 10 September 1997**

ABSTRACT: *A number of plant drugs are used in topical application meant for medical and cosmetic purposes. Many of such recommended drugs have been reported to cause contact dermatitis which fact is well supported by clinical studies. To find out the role of these plant drugs in the etiology of contact dermatitis, clinical studies of 34 such herbal drugs were carried out.*

INTRODUCTION

A number of plant drugs are used in topical application meant for medicinal and cosmetic used. Many of such recommended drugs have been reported to cause contact dermatitis and various clinical studies also support the same,[1,2.]

Plant drugs with wide use in many topical preparation are selected and their role in the etiology of contact dermatitis are studies in patients allergic to plant drugs.

Materials

The plant drugs were procured from Dr. Jains special herbs, Bombay. Vander bend chambers were used for the patch testing studies. Yellow soft paraffin was used a ointment. Base for preparation of ointments, List of plant drug selected for patch testing studies are as below:

Sl.No	Common Name	Botanical Source	Family
1	Tulsi	*Ocimum sanctum* Linn	(Labiatae)
2	Adulsa	*Adhatoda vasica* Nees.	(Acanthaceae)
3	Vekhand	*Acorus calamus* Linn.	(Araceae)
4	Gokhru	*Tribulus terrestris* L	(zygophyllaceae)
5	Jatamansi	*Nardostachys jatamansi* DC.	(Valerianaceae)
6	Papaya	*Carica papaya* Linn	(Caricaceae)
7	Nagarmotha	*Cyperus scariosus* R.Br.	(Combretaceae)
8	Arjun	*Terminalia arjuna* W& A.	(Gramineae)
9	Khus	*Verminalia zizaniolides* L.	(Liliaceae)
10	Aloes	*Alow vera var* officinalis	(Liliaceae)
11	Ritha	*Sapindus mukorossi* Gaertn	(Sapindaceae)
12	Raktachandan	*Pterocarpus santalinus* L.	(Leguminosae)
13	Satavari	*Asoaragus racemosus* Willd.	(Liliceae)
14	Kachur Sugandhi	*Hedychium spicatum* H ex S.	(Zingiberaceae)

15	Sitaphal	*Annona sugamosa* Linn	(Annonaceae)
16	Chandan	*Santalum album* Linn	(Santalaceae)
17	Neem	*Zadirachta indica* A Juss.	(Meliaceae)
18	Amla	*Emblica officinalis* Gaertn.	(Euphorbiaceae)
19	Jaswand	*Hibiscus rosa-sinenis* Linn	(Malvaceae)
20	Manjishtha	*Rubia cordifolia* Linn	(Rubiaceae)
21	Dalimb	*Punica granatum* Linn.	(Punicaceae)
22	Kulinjan	*Alpinia officinarum* Hance	(Zingiberaceae)
23	Amba Haldi	*Curcuma amada* Roxb	(Zingiberaceae)
24	Jyesthamadhu	*Glycyrrhiza glabra* Linn	(Leguminosae)
25	Mehendi	*Lawsonia alba* Linn	(Lythraceae)
26	Babool	*Acacia Arabica* Willd.	(Leguminosae)
27	Bakul	*Mimusops elengi* Linn	(Sapotaceae)
28	Brahmi	*Centella asiatica* Linn	(Umbelliferae)
29	Lodhra	*Symplocos racemosa* Roxb	(Symplocaceae)
30	Bavchi	*Psoralea corylifolia* Linn	(Leguminosae)
31	Aswagandha	*Withania somnifera* Dun	(Leguminosae)
32	Shikekai	*Acacia concinna* DC	(Leguminosae)
33	Anantmul	*Hemidesmus indicus* R.Br.	(Asckeouadaceae)
34	Khair	*Acacia catechu* Willd.	(Leguminosae)

Almost all the 34 plant drugs were well authenticated and confirmed by comparing with genuine drugs both on the basis of microscopic and TLC studies of the powered drugs.

Preparation of Ointment

Coarsely powdered plat material was macerated with a sufficient volume of a mixture of chloroform and methanol (3:1) to from a mobile suspension and allowed to stand at room temperature overnight. The mixture was filtered and the residue extracted again with chloroform: methanol mixture. The two filtrates were combined and evaporated to dryness by distillation under reduced pressure at a temperature not exceeding 40oC. The extractive was weighed and resuspended in a known volume of diethyl ether to give a reasonably homogeneous, pipettable suspension. Yellow soft paraffin (100g) was melted at 65oC in a fume cupboard and volume of the ether suspension equivalent to 1 g of plant extract was added dropwise with vigorous stirring. At this temperature the diethyl ether was rapidly evaporated to yield a fairly homogeneous 1% suspension of the plant extract in the paraffin. The suspension was poured to screw-topped vials and cooled rapidly under a stream of water to maintain homogeneity[3.]

Patch testing procedure

Chemotechnique allergens can be applied to all types of patch testing plasters. Before application, the test plasters should be placed with the test chamber up. The suitable amount of the yellow soft paraffin based allergens were applied into the chamber (vander bend). Then the chambers were applied on back side of the normal volunteers (control) and patients allergic to plant drugs[4.]

Eight normal volunteers (control) and two patients allergic to plant drugs were taken for patch testing. The patients suffering

from the disease were treated for their illness till its subsides. Effect of patches for a contact period of 48 hours and 72 hours were studied. The patches were removed after the specified time interval and looked for the development of any symptoms of nonvesicular (weak reaction), oedematous or vesicular (strong reaction), oedematous or vesicular (strong reaction), ulcerative or bubbous (extreme reaction) and irritation reactions.

Results and Discussions

All the normal volunteers showed no allergic symptoms after both 48 hours and 72 hours. But the patients showed to exert positive reaction of nonvesicular nature to all the drugs applied in both groups of 48 hours and 72 hours study.

The positive reaction to the allergens may be due to cross sensitivity as many f the antigens have common active principles, Cross sensitivity due to the active principles is not well known but the possibility will have to be ruled out which however necessitates further study.

The large number of positive reaction could also be due to excited skin syndrome (ESS) where the skin is hyper irritable following a strong positive reaction and leads to false positive reading at other patch testing sites.

Further studies are required to achieve ideal concentration for patch testing and identification of cross sensitivity between various plant antigens.

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