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Subject: Patch Test Results

Following a visit from Dr. Niels Hjorth in December 1969, we decided to change our patch test chemical screening set to the European Standard. From December 18, 1967 to March 17, 1970 we tested 184 patients, referred by dermatologists in British Columbia, to a patch test screening set listed below.* The positive reactions, which were considered clinically significant, are enumerated.

	<u>Concentration</u>	<u>Vehicle</u>	<u>Male</u>	<u>Female</u>
1. Balsam of Peru	10%	Petrolatum	9	1
2. Benzocaine	5%	"	2	0
3. Chromium Sulfate	2%	"	1	4
4. Coal Tar	5%	"	12	5
5. Cobalt Sulfate	2%	"	6	7
6. Diphenylguanidine	0.5%	"	4	2
7. Formaldehyde	0.5%	"	3	2
8. Ichthammol	5%	"	2	0
9. Lanolin	as is	"	1	0
10. 2-Mercaptobenzothiazole	1%	"	6	12
11. Mercury Biochloride	0.1%	"	0	1
12. Neomycin	25%	"	5	9
13. Nickel Sulfate	5%	"	16	23
14. Paraphenylenediamine	2%	"	18	13
15. Pine Tar	5%	"	9	3
16. Potassium Dichromate	0.5%	"	11	4
17. Tetramethylthiuram Monosulfide	1%	"	3	6
18. Turpentine	2%	"	1	0
19. Usnic acid	1%	"	8	0
20. Vioform	5%	"	3	2

* Obtained from Hollister-Steir Laboratories, P.O. Box 3030, Calgary, Alberta.

2. Shoe Wear Dermatitis

For investigation, numbers 3, 6, 7, 10, 13, 14, 16 and 17 in the standard screening set were used. In addition, the following two chemicals were used for testing with the positive results enumerated: Bismark Brown (M-7, F-2) and Hydroquinone Monobenzyl Ether (M-5, F-2).

3. Investigation of Allergic Contact Dermatitis Caused by Plants.

During the period December 18, 1967 to May 4, 1970 we have tested ~~investigated~~ 125 patients to plants. The following positive patch test reactions were considered clinically significant. The extracts asterisked were obtained from local trees by the method of Fregert and Rorsman.¹. The other extracts were obtained from Hollister-Steir Laboratories.

	<u>Concentration</u>	<u>Vehicle</u>	<u>Male</u>	<u>Female</u>
Oak	10%	petrolatum	1	0
Walnut, black	10%	"	2	0
Hemlock-Spruce	10%	"	1	0
Pine	10%	"	2	0
Fir	10%	"	2	0
Poplar	10%	"	1	0
Aspen	10%	"	1	0
* B.C. Fir	20%	acetone	6	2
* B.C. Balsam	20%	"	3	0
* B.C. Hemlock	20%	"	1	0
* B.C. Cedar	20%	"	0	0
Cocklebur	1 in 10	Acetone	3	0
Dog Fennel	1 in 10	"	3	1
Lamb's Quarter	1 in 10	"	0	1
Marshelder	1 in 10	"	4	0
Poison Ivy	1 in 10	"	2	3
Sneezeweed	1 in 20	"	7	0
White Sweet Clover	1 in 10	"	1	1
Wild Feverfew	1 in 20	"	7	0
Yarrow	1 in 10	"	3	0
Orchard Grass	1 in 10	"	0	1
Foxtail Grass	1 in 10	"	1	1
False Ragweed	1 in 20	"	3	1
Blue Myrtle	1 in 10	"	0	1
Chrysanthemum	1 in 10	"	4	2
Coreopsis	1 in 10	"	0	1
Corn Flower	1 in 10	"	0	1
Cosmos	1 in 10	"	0	2
Feverfew	1 in 10	"	5	1
Shasta Daisy	1 in 10	"	1	0
Tansy	1 in 10	"	6	0

COMMENTS

- 1) Poison ivy is not present in the lower mainland area of British Columbia, but is present in other parts of the province.
- 2) Ragweed is not present in the lower mainland area of British Columbia except along the railroad tracks in the Fraser River Valley. The seeds

are presumably carried from the east but the plants fail to thrive for climatic reasons.

3) We have not encountered a case of allergy to Western Red Cedar. We have a small amount of the following pure chemicals from this tree, extracted at the Faculty of Forestry, The University of British Columbia: Methyl thujate; α - Thujaplicin; β - Thujaplicin; Thujic acid; 7 - Hydroxy 4 - isopropyl tropolone 1% in ethanol. We would be pleased to send samples to anyone who has such a case.

4. Liverworts and Lichens

In forest-workers with allergic contact dermatitis the following chemicals derived from plants have been found responsible in the numbers listed:

	Concentration	Vehicle	Male	Female
Sesquiterpene lactone (<u>Frullania</u>)	250 mgm/ml	80% ethanol alcohol	18	0
Usnic acid (lichens)	1%	petrolatum	10	0
Atranorin	1%	"	4	0

COMMENT

All of the patients allergic to lichen chemicals also are allergic to Frullania, probably by multiple specific sensitivity.

1. Fregert, S. and Rorsman, H.: Arch. Derm. 87:693, 1963.