

Name: Niels Hjorth

Address: The Finsen Institute
Copenhagen

Subject: Plant Dermatitis

In Denmark Primula obconica is the predominant cause of plant dermatitis, and accordingly since 1935 included in the standard patch test series. Other plants have been tested in 1) patients suspected of plant dermatitis, but not sensitive or with a false negative reaction to primula, 2) housewives with hand eczema of unexplained origin, and 3) persons professionally exposed.

Material: 1) All positive reactions to plants among 51,049 patients tested from 1935 to 1965 were tabulated.

2) The number of tests with the various plants was evaluated by an analysis of all tests performed on 11,310 patients in six years (1944, 1947, 1950, 1953, 1956, and 1959) assumed to yield a representative sample of the 30 year period.

Results: The more than 2300 patients reacting to Primula obconica, P.malacoides, and P.sinensis have been reported elsewhere (1) and are excluded here.

420 positive reactions to other plants were recorded between 1935 and 1964. Those most common appear from fig. 1.

In the six years where both positive and negative tests were analysed a total of 2108 tests with plants had been performed. Of these 58 (2.7 per cent) were positive, and 2,050 negative. Five species accounted for 30 positive reactions, 18 other species for 28 positive reactions, while 227 species gave negative reactions throughout. Those most frequently tested appear from fig. 1.

Indoor plants accounted for 72 per cent of the tests, cultivated garden plants for 25 per cent, while only 3 per cent of the tests had been performed with wild plants. Tulip dermatitis was mainly of occupational origin. The remainder of the plants caused or contributed to housewives' eczema.

Comments: The details of the species were not always recorded, so in the present study all types of Begonia and some geranium (Pelargonium) had to be added together.

Begonia rex gives irritant reactions, here recorded as positive. Other types of Begonia invariably gave negative reactions, although Agrup (2) has recorded reactions to B.semperflorens. The yield of positive reactions to Abutilon was relatively high, but once again some must be suspected of being of irritant nature.

Tolmiea menzesii (3,4) is a medium sensitizer but extensively tested, hence the high number of positive reactions registered. It is noteworthy that extensive testing with Danish indoor ivy gave a low yield of reactions, although dermatitis from outdoor ivies has been repeatedly observed.

The study throws an interesting light on the principles guiding the selection of substances for testing in clinical practice. Hundreds of tests were performed with very weak sensitizers. This type of testing tends to

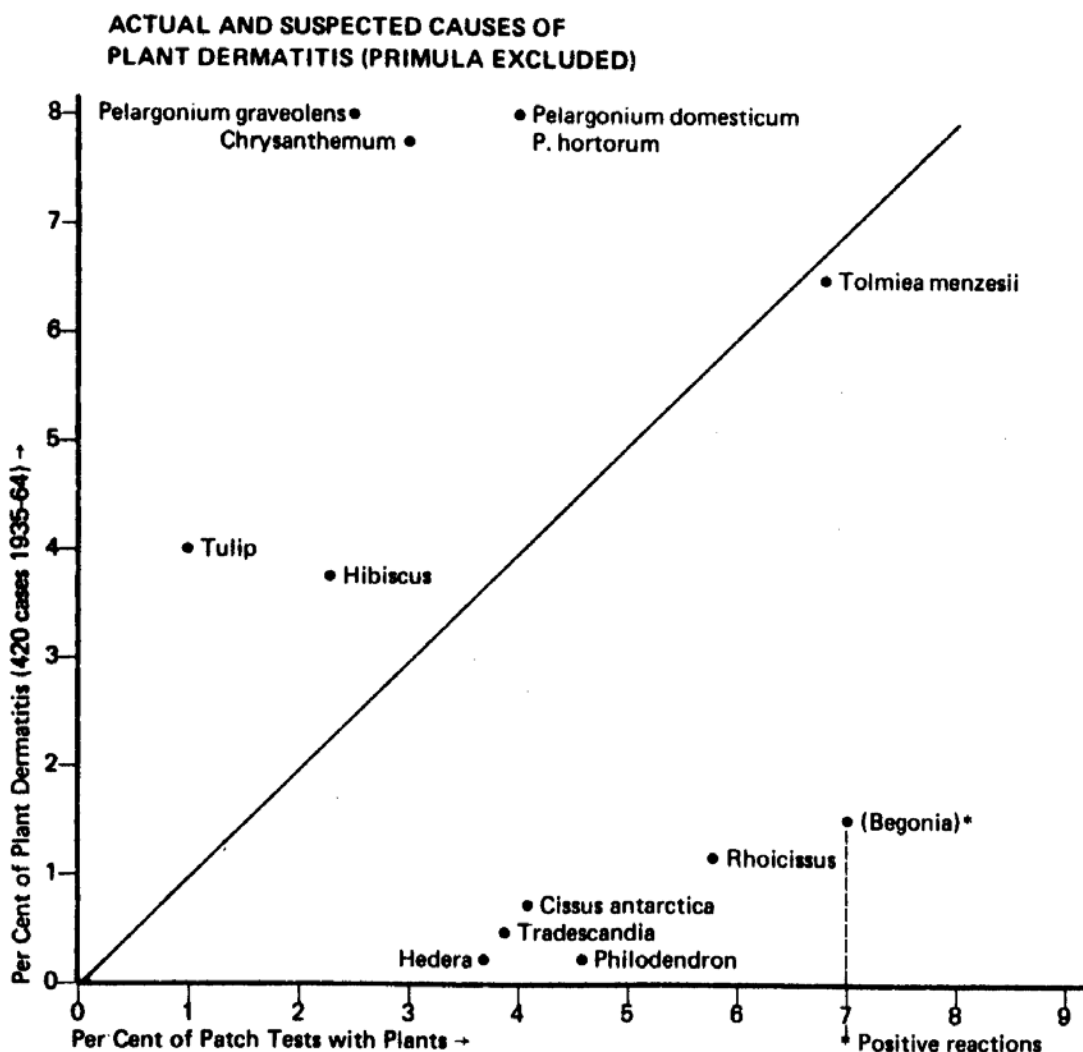


Fig. 1. * Begonia - irritant reactions

perpetuate itself, since positive or irritant reactions must occur sometimes if a high number of tests are performed. A positive reaction or "report of a case" sticks to the mind, and if the negative reactions are not counted, the hypoallergenic properties of a plant are never realized. The occasional positive reactions divert the attention from more potent sensitizers. Chrysanthemum, geranium, narcissi (2), and probably a number of outdoor plants should be tested more frequently. Wild plants must cause more dermatitis than appears from the present study.

References:

- 1) Hjorth, N. (1966), *Trans. St. John's Hosp. Derm. Soc.* 52:207
- 2) Agrup, G. (1969), *Hand Eczema, Acta Derm. Venereol.*, 49: suppl. 61
- 3) Hjorth, N. (1965), *Europ. Congr. Allerg. Acta Derm.-Venereol.*, p.65
- 4) Calnan, C.D. (1969), *Contact Dermatitis Newsletter*, No 5, p. 98