

Letter to the Editor

Sir,

Any method of hyposensitization for hay fever involving a reduction in the number of hyposensitizing injections is of interest to both doctor and patient. Previous experiences with the use of antigen (grass pollen) in the aqueous phase in a mineral oil (drakeol) and an emulsifying agent (Arlacel) of sufficient stability to retard the absorption of antigen (marketed in the U.K. as a three injection method D.VAC, Bencard) demonstrated satisfactory hyposensitization.

Severe local reactions (Gwyn Evans, 1963) and general reactions could occur with this form of hyposensitization—a safer base appeared to be necessary (Blair, 1968).

This problem appeared to be solved with the development of a glutaraldehyde-treated mixed grass pollen-tyrosine adsorbate (Pollinex, Bencard), which is now available in the three dose form; 300 Noon units, 800 Noon units and 2000 Noon units.

Table 1. Data of the thirty-six patients selected for treatment

Sex:	
Males	20
Females	16
Age range (years):	11-50
Between 11 and 19	15
Between 20 and 29	13
Over 30	8
Hay fever (years)	3-9
Mean	5
Family history of atopic disease	9 (25%)
Hay fever only	12
Presence or history of other atopic disease:	
Pollen asthma	24
Perennial asthma	13
Perennial rhinitis	19
Recurrent or persistent eczema	9
More than one atopic disease	24
Previously hyposensitized	10
Range of years	1-10
Mean	3.6
Positive prick skin test results:	
Grass pollen only	16
With associate dust mite sensitivity and/or	20
Animal hair sensitivity	8

The reports to date record a success rate of about 75% with a low incidence of serious side effects (Miller & Tees, 1974; Miller, 1976; Purser, 1976). Local and general reactions can, however, occur with Pollinex and it is essential that the dosage schedule should not be rigid.

The following is the experience with hyposensitization of a group of thirty-six hay fever patients originally referred to hospital as their hay fever had not responded to the administration of antihistamines in previous years. Twenty-six patients had had no other treatments and ten patients had been previously hyposensitized. The details of the patients are shown in Table 1.

In view of the problems experienced with D.VAC Bencard (Blair, 1968) the hyposensitizing injections were all personally administered at hospital at fortnightly intervals commencing from 10 to 20 April 1975 (Davies & Smith, 1973). The first injection in all cases was 300 Noon units administered subcutaneously in the deltoid insertion area. The site of the injection was inspected before the patient left the hospital not less than 60 min later.

Each patient was issued with a supply of chlorpheniramine maleate 4 mg tablets (Piriton) to be taken if local reactions larger than 5 cm occurred and a salbutamol aerosol (Ventolin) for use if wheezing occurred.

The subsequent dosage was dependent on whether local or general reactions occurred.

Local reactions occurred in twenty patients (56%). These are indicated in Table 2.

General reaction occurred in six patients, a summary of these is shown in Table 3.

Table 2. Details of the thirty-six patients selected for treatment

(1) Minor		
Local irritation and swelling up to 7.5 cm diameter, persisting up to 3 days	in	10 patients of whom
Number previously hyposensitized		5
(2) Moderate		
Local swelling from 7.5 to 12.5 cm diameter persisting for more than 3 days—range 3–21 days with mean duration 8 days	in	7 patients of whom
Number previously hyposensitized		2
(3) Severe		
Whole arm swollen for more than 3 days—range 3–15 days with mean duration of 7 days	in	3 patients of whom
Number previously hyposensitized		2

Table 3. Signs of general reactions in six patients

Reaction	Number
Wheezing	4
Sneezing and runny nose	2
Headache, nausea and giddiness	1

Table 4. Analysis of patients, all with grass pollen positive prick skin test, receiving modification of hyposensitization dosage

Age	Years of hyposen- hay fever	Previous sitizing courses	Other atopic disease	Additional prick skin test results apart from grass pollen	Dosage (Noon units)	Reactions		Results of nasal provocation test
						Local	General	
27	5	0	Pollen asthma (PA)	nil	300	Whole arm swollen for 3 days	Wheezed after 12 hr for 7 days	Not done
					100		Wheezed 2 days later for 2 days	
					Not given			
12	8	4	PA Eczema (E)	House dust (HD) Dust mite (DM) Animal hair (AH)	300	Nil	Wheezed after 8 hr for 24 hr	+
					500	Swelling 10 cm diameter for 24 hr	Wheezed within 30 min for 1 week	
					500	Nil	Wheezed within 2 hr for 36 hr	
21	10	0	PA	Nil	300	Swelling 10 cm diameter for 3 days		Not done
					300	Whole arm swollen for 7 days		
					Not given	Patient refused		
27	14	0	PA	DM HD AH	300	Swelling 10 cm diameter for 3 days		-
					500	Whole arm for 5 days		
					500	Whole arm for 3 days		
23	3	0	PA Perennial Rhinitis (PR) Perennial Asthma (PeA)	DM HD AH	300	Whole arm swollen for 3 days	Headache, giddi- ness, nausea for 6 hr within 1 hr	+
					300		Wheezed for 6 after 4 hr	
					500		Nil	
22	3	1	PA PR PeA	DM HD AH	300	Swelling 10 cm diameter for 1 day		+
					800		Wheezed for 2 + days, 2 days later	
					800		Nil	

The wheezing developed from 30 min to 2 days after the hyposensitization injection and persisted from 1 to 7 days—it responded either to salbutamol aerosol or parenteral adrenalin. No patient lost time from school or work.

The dosage was modified in six female patients as shown in Table 4.

Previous hyposensitization did not protect from local or general reactions. The results obtained are indicated in Table 5.

Table 5. Summary of response to hyposensitization in thirty-six patients

Results of treatment	Numbers and comments	
Very much better	18	(14 with no local reactions and no medication) of whom 5 had been previously hyposensitized, all with negative provocation tests
Better than previous year	9	(3 hyposensitized previously) 3 negative provocation tests
Total	27	(75%)
Same or worse than previous years	3	
Course of hyposensitization incomplete	2	
Modified dosage	4	(2 previously hyposensitized)
Those patients with negative provocation tests all benefited from hyposensitization		

In this series, a good result was obtained with 75% of the patients; 16% of the patients, however, had severe local and/or general reactions even when the dosage was carefully supervised, and two patients (6%) did not complete the course of injections because of the reactions.

Caution with the dosage scale is, in my opinion, an essential when using this form of hyposensitisation.

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