

## ALLERGIC DISEASES IN THE ELDERLY

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THE observations recorded were made in a residential town situated on the Thames Estuary, not far from London. The proportion of retired people living in this district is large.

Observation in respect of allergic diseases was kept on all retired patients over the period of 12 months during the years of 1966–67.

Table I shows the sex and age distribution of the retired patients. There are 3,000 patients in the practice, and among them 885 patients are over the age of 65 years. This represents 29.4 per cent of the practice.

TABLE I  
AGE AND SEX DISTRIBUTION OF OLD PATIENTS

<i>Age in years</i>	<i>Male</i>	<i>Female</i>
65–69 .. .. .	97	214
70–74 .. .. .	57	146
75–79 .. .. .	36	127
80–84 .. .. .	23	132
85–89 .. .. .	5	33
90–94 .. .. .	2	10
95 and over .. .. .	1	2
Total .. .. .	221	664

Table II shows the allergic diseases found among the elderly patients. There were 76 cases of allergic diseases. This represents 8.5 per cent of all the retired patients.

### Methods of diagnosis

*Bronchial asthma.* “Asthma is a disease characterized by variable

dyspnoea due to widespread narrowing of peripheral airways in the lungs and varying in severity over short periods of time." (Scadding 1963). There is a possibility of confusing bronchial asthma in the

TABLE II  
ALLERGIC DISEASES AMONG ELDERLY PATIENTS

<i>Allergic disease</i>	<i>Number of cases</i>	
	<i>Male</i>	<i>Female</i>
Bronchial asthma .. .. .	3	17
Perennial allergic rhinitis .. .. .	2	4
Seasonal hay fever .. .. .	1	7
Drug sensitivity .. .. .	2	7
Contact dermatitis .. .. .	10	15
Urticaria .. .. .	—	1
Allergic insect bites .. .. .	1	3
Solar erythema .. .. .	—	2
Vernal conjunctivitis .. .. .	1	—
Total .. .. .	20	56

elderly with cardiac asthma. Differential diagnosis of bronchial asthma from cardiac asthma is presented in table III.

There were three male and 17 female patients suffering from asthma, or 2.3 per cent of all elderly patients. Patients suffering from chronic bronchitis and emphysema were excluded. All asthmatic patients had chest x-rays. The age of onset of asthma varied from 20 years to 65 years. According to Rees (1967) the majority of asthmatic patients develop symptoms before the age of 25 years. Asthma can start at any age and in this group nine patients developed asthma after the age of 50 years. Intradermal skin tests using Bencard's solutions were performed.

*Perennial allergic rhinitis.* This condition was diagnosed in six patients (1.0 per cent). Characteristically the patients complained of constant nasal catarrh, and postnasal drip. The symptoms persisted throughout the year. Congestion of nasal mucosa and hypertrophy of turbinates were the common findings. E.N.T. examination was carried out in every case, to exclude any other

diseases. Skin tests were carried out to determine any allergic factors.

*Hay fever.* There were eight cases of hay fever (1.0 per cent). These patients had typical symptoms of sneezing, lacrimation and nasal congestion every summer. Skin tests showed sensitivity to grass pollens in all eight cases and also sensitivity to tree pollens in three patients.

*Drug sensitivity.* Nine patients (1.0 per cent) suffered from drug allergy. Penicillin allergy was observed in four cases. There was

TABLE III  
BEDSIDE DIAGNOSIS OF BRONCHIAL ASTHMA FROM CARDIAC ASTHMA IN ELDERLY PATIENTS

<i>Symptoms and signs</i>	<i>Bronchial asthma</i>	<i>Cardiac asthma</i>
General appearance	Tired and exhausted	Frightened and apprehensive
Skin . . . . .	Normal	Pale, cold, cyanosed, perspiration present
Orthopnoea . . . . .	Present	Present
Veins in the neck . . . . .	Normal	Distended
Precordial pain . . . . .	Absent	Often present
Angor animi . . . . .	Absent	Often present
History of other allergic diseases and family history of allergy . . . . .	Present	Absent
Heart and B.P. . . . .	Left cardiac border and apex beat difficult to locate, but not displaced to the left. Heart sounds normal. B.P. normal.	Heart usually enlarged. Apex beat outside midclavicular line. Cardiac rhythm and heart sounds often abnormal. B.P. elevated.
Breath sounds . . . . .	Expiratory phase prolonged with loud wheezing and rhonchi.	Short, gasping breaths. Bilateral basal pulmonary râles.

one case each of sensitivity to 'sedormid', tolbutamide, isoniazide, P.A.S. and phenobarbitone. The diagnosis was based on history of having penicillin injections, and the taking of the other drugs orally

and allergic symptoms which followed. In all cases cutaneous manifestations were the main symptoms. They subsided upon the withdrawal of the drugs.

*Contact dermatitis.* There were 25 cases (3.0 per cent) suffering from this condition. The diagnosis was made on anatomical distribution of the skin lesion, and a history of contact with topical medicaments, plants, garments or cosmetics. Soap dermatitis of the hands, seborrhoeic and constitutional eczemas were excluded. Table IV shows the substances responsible for contact dermatitis.

TABLE IV  
SUBSTANCES RESPONSIBLE FOR CONTACT DERMATITIS

<i>Substance</i>	<i>No. of cases</i>
After shaving lotion .. .. .	2
Eye lotion .. .. .	3
Eye ointment (albugid) .. .. .	1
Hat bands .. .. .	2
Antiseptic cream .. .. .	1
Hair 'tonic' for grey hair .. .. .	1
Leather (shoes) .. .. .	2
Chlorhexidine cream ('hibitane') .. .. .	1
Nickel .. .. .	3
Primula plants .. .. .	2
Antiseptic lotion .. .. .	2
Mascara .. .. .	3
Plastic materials .. .. .	2
Total .. .. .	25

Patch tests (48 hours) with leather hat bands materials were positive.

*Urticaria.* There was only one case of urticaria combined with angioneurotic oedema. Skin tests showed sensitivity to beetroot. Patient's symptoms subsided upon stopping eating pickled beetroot.

*Allergic insect bites.* Severe local allergic reactions occurred in four patients (0.4 per cent). Swellings of the arms and legs, large

blisters and intense itching were the main symptoms. Skin tests showed sensitivity to mosquitoes.

*Solar erythema* (summer eruption). Two cases of this condition were recorded. One woman, aged 85, had suffered from it every summer for the past 20 years. The second patient, a man, had suffered from it for 15 years. In both the face and the backs of the hands were affected.

*Vernal conjunctivitis*. One case of this complaint was observed. A man aged 68 years had suffered from it every summer for the past ten years.

### Discussion

A practice with a high proportion of retired patients (29.4 per cent) offers an excellent field for research in geriatrics. Allergic diseases are often misdiagnosed in the average population and especially in geriatric patients. Correct diagnosis and removal of the offending allergen sometimes brings a dramatic disappearance of symptoms. Perhaps the most difficult condition to diagnose in the elderly is bronchial asthma. Williams (1964) discussed some of the diagnostic problems of asthma. There are certain cardiac conditions in the elderly which can cause acute attacks of dyspnoea at night, very similar to bronchial asthma. It is descriptive to call such an attack 'a cardiac asthma' without going into details of the pathological conditions responsible for it. It is equally important to diagnose chronic bronchitis and emphysema. In geriatric patients multiple clinical conditions are common. Hypertension, ischaemic heart disease and respiratory infections can occur in asthmatic patients. As a rule blood pressure is normal or subnormal during attacks of asthma (Hansel 1953). Syphilitic aortitis is a rare condition, but the author encountered two cases of it in a previous practice.

Nocturnal attacks of dyspnoea brought on by syphilitic aortitis used to be called 'syphilitic asthma'. Diaphragmatic hernia causes much discomfort, breathlessness and cough at night. It can be mistaken for asthma. Neoplasms of the thyroid and retrosternal goitre can cause respiratory distress. Carcinoma of the bronchus and tumours of the mediastinum should be excluded by x-ray of the chest. Diagnosis of bronchial asthma in the elderly can only safely be made, if all other conditions causing dyspnoea are excluded. This is quite within the means of a family physician with the help of the x-ray department and the pathological laboratory of the local hospital. Tests to confirm allergic sensitivity can be performed if the general practitioner has the experience.

Patients complaining of continuous colds suffer frequently from perennial allergic rhinitis. They complain also of a cough due to

postnasal drip. This condition is difficult to treat. In some instances allergy to inhalants is responsible for it, and removal of allergens is helpful. Self-medication is common, and should be discouraged. Seasonal hay fever is easy to diagnose. Recent advances in allergy make it possible to treat hay fever successfully with only a few injections of pollen vaccine. Some patients find the eye symptoms distressing. Impairment of vision may result from excessive lacrimation in ageing eyes. Steroid containing eye drops are better avoided. Antihistamine eye drops are effective for the relief of the lacrimation of hay fever. Both perennial allergic rhinitis and seasonal hay fever can cause deafness due to the blocking of the Eustachian tubes. This may aggravate deafness already present in the elderly patients. It is advisable to refer such patients to an ENT clinic for treatment.

Elderly patients often suffer from so called senile pruritis. This subject was recently reviewed by Young (1967). Cutaneous manifestations of drug or food allergy might be ascribed to this condition. There are no characteristic skin lesions resulting from drug sensitivity, urticaria, angioneurotic oedema, dermatitis and generalized pruritis are the most common manifestations of drug allergy.

Some drugs are notorious for causing sensitivity, *e.g.* 'sedormid'. One female patient aged 81 had suffered from skin rashes for the past 15 years. Blood count showed no abnormalities. She was taking 'sedormid'; her skin lesions subsided when she stopped taking the drug. Self-medication with eye preparations for failing vision is common in the elderly. Inflammatory conditions of eyes, eyelids and skin of the orbital region should be investigated for possible contact allergy. A popular eye lotion ('optrex') contains seven different ingredients and an antiseptic lotion (T.C.P.) contains five chemical substances. It is worthwhile to stop all local medication in a localized inflammatory skin condition. Patch tests (48 hours) are helpful in establishing diagnosis of contact dermatitis. Mascara is used irrespective of age, and sensitization to it occurs in elderly women. Nickel, found in suspenders, brassiere clips, or necklace clips, is a well known sensitizer. Plastic material, used in hearing aids, can be responsible for dermatitis of the external ear. Urticaria and angioneurotic oedema while common among young children was found in only one elderly woman. Foods are sometimes responsible for this condition. Blamoutier (1961) recorded five cases of this complaint, due to sensitivity to vegetables, in a series of 125 cases of urticaria and angioneurotic oedema. Solar erythema should be differentiated from cutaneous manifestations of lupus erythematosus and photosensitization after taking drugs, *e.g.* sulphonamides.

Bees, wasps, horse-flies, mosquitoes, fleas and gnats, all can cause allergic skin rashes. Two types of reactions occur; the immediate

and the delayed. The immediate reaction develops within a few minutes after a bite, and subsides within a few hours. Delayed reactions are of tuberculin type and persist for several days. Patients in this study suffered from delayed type of reactions. Widespread erythema and blisters were found in all four cases. There is a risk of infection giving rise to boils or cellulitis. Anaphylactic reactions and sudden deaths due to insect stings occur, but no such reactions were observed in this series. One case of vernal conjunctivitis was recorded. This condition occurs in spring and summer, but the severity of symptoms does not correspond to concentration of pollens in the air. The symptoms usually terminate with the advent of frost, and it is possible that allergy to moulds is responsible for this complaint (Hansel 1953).

### Summary and conclusion

Observation was kept during 12 months on elderly patients suffering from allergic diseases. There were 76 cases of allergic diseases (8.5 per cent) among 885 retired patients. Twenty patients suffered from bronchial asthma, six from perennial allergic rhinitis, and eight from hay fever. There were 25 cases of contact dermatitis, and nine cases of drug sensitivity. Four patients suffered from allergy to insect bites, two from solar erythema, one from urticaria, and one from vernal conjunctivitis. Differential diagnosis of asthma and of other allergic diseases is discussed. Attention is drawn to contact dermatitis and to drug allergy which are often treated as senile pruritis.

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