Hyposensitisation to house dust mites

When someone with asthma seeks help, what he gets depends on the doctor he consults. Doctors who concentrate exclusively on prescribing medicines to control symptoms may overlook avoidable factors such as a domestic pet or an industrial allergen. Others may try to discover precipitating causes from the history and do a battery of skin tests. When the results of the skin tests are negative and an industrial cause has been excluded, the asthma is called intrinsic; if one or more test results are positive the patient is labelled as an atopic and the asthma as extrinsic.

What happens next varies considerably. At worst the substances producing skin reactions are, without further thought, regarded as the cause of the asthma, and loved pets may be banished or slaughtered—probably without benefit. Skin reaction results may be regarded as an automatic indication for hyposensitisation, and a cocktail may then be ordered containing all the substances to which the skin reacts. Vaccines containing many antigens are still widely used, though different manufacturers advise that not more than four, six, or eight antigens should be included. Since the total amount of protein in a vaccine is limited the greater the number of constituents the smaller will be the dose of a particular allergen. Doctors who have faith in hyposensitisation should try to decide which allergens are most relevant and order a vaccine with few constituents; some use only one allergen at a time. Nevertheless, many clinicians use hyposensitisation for perennial asthma hardly at all or indeed never.

The most common dilemma is whether or not to use hyposensitisation when the results of tests with house-dust-mite extract are positive. The wide prevalence of mites Dermatophagoides pteronyssinus, the frequency of positive skin test results, the finding of specific IgE in the blood, and production of asthma by nebulised mite extract have led to the belief that allergy to these mites is very important. Support for this view has come from patients with a history of relief in environments with fewer mites (hospitals and mountains) and of attacks when they are exposed to house dust or in bed with their mites.

Is the part played by mites being exaggerated? The most important abnormality in asthma is hyper-reactivity of the bronchi to a wide range of stimuli. Just because individual patients' asthma is labelled as extrinsic does not mean that it is all due to allergens and that the factors which produce intrinsic asthma do not also operate. Positive skin test results with D pteronyssinus are found in 14% and with grass pollen in 10% of the population at large, and most such persons have no symptoms. Furthermore, many patients with asthma and positive skin test results with grass have no hay fever or summer exacerbations of asthma. If, then, skin reactions are known often to be clinically irrelevant, this may also be true for tests with mite extracts in perennial asthma. Though many studies have shown a close correlation between asthma on exposure to house dust and evidence of mite allergy, this was not so in the multicentre study organised by the British Thoracic and Tuberculosis Association. In some patients the asthma may be a non-specific response to dust or to the effort of sweeping and bed making. Nocturnal attacks are also common in intrinsic asthma and in the recurrent asthma which sometimes follows a single exposure to an allergen. Admission to hospital or a mountain holiday affects many other factors as well as exposure to mites, and children who remain in their own homes often improve when their parents are replaced by foster parents. Even a positive result with a bronchial provocation test does not prove that mites are the dominant factor, since the nebulised dose may be bigger than the amount of allergen inhaled in ordinary life.

Would there be much less asthma about if mites were eradicated? Reducing exposure by vacuum cleaning beds led to improvement in one trial but not in another. The answer may have to await the introduction of effective acaricides which are harmless to man, and some progress is being made in this direction.

If a mite vaccine is to be used there is a choice of tyrosine-adsorbed, alum-adsorbed, and water-soluble preparations; while maintenance injections of the top dose can be given monthly for a year or more. In assessing the value of treatment account should be paid only to the results of double-blind placebo-controlled trials. In early trials tyrosine-adsorbed and alum-adsorbed preparations seemed to be ineffective, though aqueous extract produced some benefit. A more recent trial used an aqueous solution which was three times the strength of the current commercial preparation. The patients had positive skin test results with mite extract together with worse asthma after exposure to house dust or a reaction to a nasal provocation test or both. Treatment was
continued for 18 months, but there was no benefit. In contrast, another trial using a tyrosine-absorbed extract given for a year to children did find some benefit. All these patients had a reaction to a bronchial provocation test, and in many it was a dual reaction. In the ones who showed most improvement the late reaction was lost while the immediate reaction was unchanged—an observation which shows how little we understand of hyposensitisation.

On present evidence it does not seem worth giving *D. pteronyssinus* extract to adult asthmatics who have a positive skin test result and get worse on exposure to house dust. Fairly prolonged hyposensitisation may be beneficial, however, in young asthmatics in whom the relevance of the mite to the asthma has been more firmly established by a bronchial provocation test.


---

Second-best prostatectomy?

One in every 10 men who pass the age of 40 will sooner or later need an operation for benign enlargement of the prostate. In England and Wales over 80% of these operations are performed by general surgeons using (as a rule) one of the open operations which require an abdominal incision and the enucleation of the adenoma from its "capsule." The technique has altered little since the turn of the century. Yet, unless the adenoma is exceptionally large, it may be removed equally completely piecemeal through the urethra using a resectoscope—an operation that is virtually painless, needs half the time in hospital, and has a low complication rate and a mortality less than half that of any of the open techniques. Nor are the results inferior: indeed, the success rate after transurethral surgery is in some respects better than after open operations.

Why, then, is transurethral resection not employed universally? Firstly, a handful of patients have enormous adenomas and the resectoscope cannot be manoeuvred past them with safety, but such people are rare. More usually transurethral resection is not performed because the surgeon has not been trained in the method. The technique is not easy either to learn or to teach, and if it is to be done safely it demands protracted apprenticeship and specialisation in urological surgery. Without this specialisation the resectoscope may cause havoc, and general surgeons without special training are wise to prefer open operations.

In 1975 the number of specialist urologists in England and Wales was examined by Ashley and Collingwood at the London School of Hygiene and Tropical Medicine. Many young surgeons would like to be trained in urology, but even now there are not jobs for those who have completed their accredited senior registrarships. What is holding progress back? As often, the problem is the shortage of money for salaries. At present, a specialist urologist can usually be appointed only by replacing a general surgeon. In some hospitals this may mean that a weary general surgeon, used to being on call one night in three, has then to expect to be on call every other night, for the newly appointed specialist urologist will usually not be adequately trained to cope with a haematoma or a vascular catastrophe. The general surgeon with an interest in urology does not exist.

Furthermore, many well-trained and dedicated general surgeons, who learnt all there was to learn of urology 20 years ago, are unconvinced of the need for specialist urologists and do not accept the superiority of transurethral over open prostatectomy. The figures, however, do not support their view. Ten years ago, when Ashley, Howlett, and Morris compared two teaching hospitals with three regional board hospitals, they found a discrepancy in mortality for prostatic hyperplasia of 1.6% versus 7.6%. What they did not point out was the even worse disparity in mortality among the three hospitals with urological specialists (2.9%) versus the two without (11.2%). Though there has been debate about the exact meaning of these figures, more recently Leach has reported from a district general hospital an overall mortality of 2.3% in 600 prostatectomies, mostly done by open methods: one death occurred in a man of only 54. This mortality is double what would be expected of a contemporary urological service offering mainly transurethral resection.

Things are better managed in Scotland, where urology has been accepted as a separate discipline for a generation. As long ago as 1969-74 the average mortality for prostatectomy was 2%/6, and in the last of those years 68% of operations were being done transurethrally with a death rate of only 1.5%. Equally impressive was the difference in duration of hospital stay, which was three to four days less for transurethral than for open prostatectomy. Argyrou et al. calculated that the money saved by this shorter hospital stay was more than enough to pay for the increase in establishment of specialist urologists needed.

The clinical argument should be that the need for urological skill is not confined to the prostate: its advantages are even more definite for patients with cancer of the bladder or urinary calculi, but the numbers are less easy to extract and compare. Alas, for the humble prostate the difference in results between the specialist and the generalist are there for all to see.

---