

hip may be fluoroscoped or radiographed in the lateral view in full flexion without the slightest risk of the displacement recurring, provided that while the thigh is brought up to 90 degrees flexion full internal rotation and full abduction are maintained.

REFERENCES

1. WHITMAN, R.: *Am. J. M. Sc., N. S.*, 1905, 130: 1.
2. HENDERSON, M. S.: *Arch. Surg.*, 1937, 35: 419.
3. SMITH-PETERSEN: *Arch. Surg.*, 1931, 23: 715.
4. JOHANSSON, S.: *Acta Orthop. Scandinav.*, 1932, 3: 362.
5. KING, T.: *Med. J. Australia*, 1934, 1: 5.
6. HENDERSON, M. S.: *Arch. Surg.*, 1937, 35: 419.
7. *Idem*: *Ann. Surg.*, 1938, 107: 132.
8. BAILEY, E. T.: *The Lancet*, 1937, 1: 375.
9. ENGEL, G. C. AND MAY, H.: *J. Am. M. Ass.*, 1938, 110: 1828.

ORAL DESENSITIZATION IN FOOD ALLERGY*

By H. E. EDWARDS

Toronto

IT is my purpose in this paper to discuss only one phase of allergy, namely, oral desensitization. There are many papers in the literature which discuss etiology and diagnosis, but most authors only give routine measures of treatment and stress elimination. Unfortunately, in children, we find that the foods most commonly acting as allergens, milk, wheat, eggs, orange, cocoa, are those which form the bulk of the growing child's diet. It is only when one attempts to eliminate such a food as milk that one realizes how important a factor it is in diet and how many of the foods in a child's daily menu contain it. Therefore, any method of treatment which will enable such a food to be used in moderation will be an invaluable boon to the person responsible for constructing the diet.

The first reference to oral desensitization as a method of treatment that I have found is that of Finkelstein, in 1905,¹ who suggested treating milk idiosyncrasy in nurslings by the administration of two to three drops of milk daily with subsequent increase. In 1908 Schofield² reported the treatment of an extreme case of egg-poisoning in a boy aged thirteen years. He gave pills containing 1/10,000th part of a raw egg and two grains of calcium lactate daily, which dose was gradually increased. His course of treatment took eight months but was completely successful. He stated that he had been able to find no previous record of the successful treatment of food poisoning. In 1912 Schloss³ wrote a more scientific article on food allergy, and described a case sensitive to egg, oat, and almond, which he desensitized to egg by the oral method. He found that following this the patient had lost sensitivity to oat and sensitivity to almond had much decreased.

He used the skin test to determine the rapidity with which he could increase the dose of egg. In 1920 Park⁴ reported a case. In 1926 Stuart and Farnham⁵ advised treatment by the oral method at an early age. In 1935 Keston, Waters and Hopkins⁶ reported success in 50 cases treated. Their cases consisted of chronic allergic eczema, urticaria, gastro-intestinal intolerances and acneform and macular erythematata of the face. They advise the method on the grounds that it is effective, inexpensive, and can be used with ordinary household measures in the home. They found it much more difficult to desensitize to egg than to any other food protein.

While practically all food allergies lend themselves to oral desensitization, one would suggest that this method has its sphere of usefulness among the group of foods which form important dietary constituents, as milk, wheat, eggs, orange, chocolate. Other food sensitivities can be readily treated by elimination without making the diet a constant care. Stuart and Farnham state, "Although the tendency to outgrow food sensitization does exist, it cannot be predicted when this result will take place in any given case. Knowing that such sensitizations may persist throughout childhood, that strict elimination requires a very abnormal type of life, and that the child may be subject to repeated severe reactions if this is not carried out, we are led to advise treatment by the oral method at an early age. This advice can be given with enthusiasm in cases of milk or egg sensitization because treatment with these substances is so simple and so regularly successful". They found in their cases the shortest period required for the natural loss of sensitivity to egg protein was two years.

* Read at the Section of Pædiatrics, Academy of Medicine, Toronto, March 21, 1940.

There appears to be a difference of opinion as to the efficacy of this method between writers of textbooks on allergy and those workers reporting the results of treating single or series of cases. The latter are of one accord in stating that oral desensitization has a real place in one's therapeutic armamentarium. Of the former, Tuft⁷ comments favourably, but most others are of Vaughan's⁸ opinion, who states in his "Practice of Allergy", 1939, "The results of oral desensitization, like those following parenteral treatment, have not been startlingly good. Even when success is achieved a long time is required." Our experience with 13 cases, together with Keston's wider experience with 50 cases, would lead us to believe that this method of treatment is to be viewed with a great deal of optimism and enables patients to consume normal amounts of important foods many months or years earlier than would otherwise occur were they left to desensitize themselves spontaneously. An interesting observation that has been made is the frequency with which mothers will volunteer the information that the child is "better in himself". They find that the desensitized patient has more vitality, the appetite improves, fatigue becomes a thing of the past, and disposition and colour are greatly improved. It is a common experience to find that the mother who has been relieved of the worry of an elimination diet and the constant fear that her child will unwittingly be fed his food poison becomes among one's most grateful parents. Moreover, as Tuft points out, the oral method is safe, easier for both doctor and patient, and greatly to be preferred over the injection method.

The details of the diagnosis of food allergy are beyond the scope of this paper. The history of the patient is probably one's most valuable aid. Protein skin tests, elimination diets, and trial and error methods all have their place, although the last is not safe when the history of the allergic upset has been one of an alarming nature.

The method used was essentially that set out by Keston *et al.*² and need not be repeated in detail. It consists in starting with minute quantities of allergen suspended in water and given daily in doses which are increased slowly at four day intervals until tolerance for the whole product is acquired. The success of the

method depends on the co-operation of the person responsible for its conduct and on the clarity of the instructions that go with it. A detailed list of the foods that contain the allergen in question must be supplied. It cannot be taken for granted that the mother will realize, for example, that butter is a fraction of milk. Complete elimination of the allergen is essential from the inception of treatment until its completion. It is my practice to carry out this elimination for two weeks prior to commencing treatment. This allows parent and patient to become familiar with the diet and, in many instances, furnishes a control period free from symptoms, which is an aid in the recognition of mild reactions occurring during treatment. Instructions are given to use a fresh solution daily. If a reaction occurs, the second dilution back from the one causing the reaction is to be reverted to, proceeding from that point as per the original schedule. Advice is given against an attempt to hurry the schedule. Time is lost if a reaction occurs, and it is felt that desensitization is more firmly established if done slowly. Further warning is given, namely, after desensitization has been accomplished overdosage of the offending food must be avoided at all times. Where possible, as in the case of milk, the daily intake should be spread evenly over the day. Some of the allergen should be consumed each day for several months and taken frequently thereafter. The following cases are illustrative of the group treated:

CASE 1

P.C. The father has eczema and hay fever, and comes from an allergic family. The patient received cow's milk in hospital, and then was entirely breast-fed until 2 months of age, when, owing to the ill health of the mother, the family physician attempted to wean her. She vomited a cow's milk formula each time it was given. Breast feeding was continued until 6 months of age, when Pablum with milk was given, which was vomited. Cream of wheat with milk was tried and it was vomited. One week later she was given two ounces of milk in a seven ounce mixture. Vomiting was immediate and continued. She was seen four hours later, vomiting bile-stained fluid, having watery stools containing much mucus, sunken eyes, marked dehydration, ashen pallor, and subnormal temperature. A few days later she was skin-tested to milk and wherever it touched her she got a large wheal. There was no wheal to S.M.A., which she was put on concurrently with oral desensitization to cow's milk. This procedure was successful, and she was able to tolerate her daily requirement of whole cow's milk.

CASE 2

J.E. Father has hay fever and paternal grandfather asthma. The patient had severe infantile eczema from shortly after birth to seven months. At this time he had a sharp attack of vomiting and diarrhoea co-

incident with attempted weaning. This necessitated admission to the Hospital for Sick Children and transfusion. Following transfusion he had three attacks of giant urticaria in two days, each requiring adrenalin. Skin tests at this time showed him sensitive to casein, lactalbumin, whole wheat, and sheep's wool. He was discharged on an evaporated milk, barley flour formula cooked for four hours. He was well for three months, when vomiting recurred with loss of weight, extreme irritability, anorexia and diarrhoea. He was again admitted to hospital for six days and discharged on the same feeding. In addition to those mentioned he was found skin-sensitive to prune, pea, soya bean. Shortly after this he developed a mild asthmatic attack. Vomiting persisted an average of once daily and mild facial eczema persisted. It was felt that the responsible allergen was probably casein and oral desensitization was commenced at the age of 14 months, while he was still kept on the cooked evaporated milk formula. This course was uneventful and he has been on whole milk, unmodified, since.

CASE 3

D.M. First seen when aged two and one-half years. A paternal uncle had asthma. The patient was seen because of fever, vomiting and wheezing. On examination his temperature was normal, he had profuse thin watery discharge from the nose, and the turbinates were swollen and pale. There were numerous rhonchi on each side of the chest, no râles, but marked expiratory difficulty. Within the next three months he had two similar attacks which the mother was definitely able to relate to tomato. Desensitization by mouth was carried out, at the end of which he was able to take tomato in average amounts with no difficulty.

The following case is presented because it represents our one failure, and illustrates the point that overloading with the allergen must be avoided after desensitization has been completed.

CASE 4

W.M. His maternal uncle had asthma. The patient was breast fed for eight months when weaning was attempted. He vomited cow's milk in various formulæ

each time it was given. Breast-feeding was continued and oral desensitization carried out, after which he tolerated milk well. He was given all he would take, which was much more than his daily requirement. At the age of 15 months it was noticed that his abdomen was enlarging. He was put on skimmed milk. At 20 months his stools were large, offensive and loose. He became pale and listless. Soon his stools contained much mucus and were somewhat frothy, and when stained with scarlet red appeared to have an excess of fat. He was put on cow's milk curds and a celiac diet. He improved slowly, but his stools continued to contain much mucus. After some months of such treatment milk was removed from the diet and he rapidly recovered.

CONCLUSIONS

Twelve of thirteen patients attempted have been successfully desensitized by the oral method. Eleven were milk-sensitive and one tomato-sensitive. This method of desensitization is reasonably sure, safe, and extremely simple. It is recommended that oral desensitization be used in all those cases in which the offending allergen plays an important part in the diet of the growing child.

REFERENCES

1. FINKELSTEIN: quoted by Vaughan.
2. KESTON, B. M., WATERS, I. AND HOPKINS, J. G.: Oral desensitization to common foods, *J. Allergy*, 1935, 6: 431.
3. PARK, E. A.: A case of hypersensitiveness to cow's milk, *Am. J. Dis. Child.*, 1920, 19: 46.
4. SCHLOSS, O. M.: A case of allergy to common foods, *Am. J. Dis. Child.*, 1912, 3: 341.
5. SCHOFIELD, A. T.: A case of egg poisoning, *The Lancet*, 1908, 1: 716.
6. STUART, H. C. AND FARNHAM, M.: Acquisition and loss of hypersensitiveness in early life, *Am. J. Dis. Child.*, 1926, 32: 341.
7. TUFT, L.: *Clinical Allergy*, Saunders, Phila., 1937, p. 108.
8. VAUGHAN, W. T.: *Practice of Allergy*, Mosby, St. Louis, 1939, p. 338.

THE THERAPY OF PEPTIC ULCER*

BY WILLIAM GOLDIE, M.D. (TOR.)

Toronto

THE discussions on peptic ulcer during recent years are quiet and restrained as befits the scientific outlook of the participants, but they have not yet eradicated from the minds of the profession the evil effects of twenty-odd years of bitter controversy. As in all such cases facts were few. The cause, characteristics and clinical course of the disease were unknown or poorly recorded, the normal actions and reactions of the tissues affected were not well understood, nor had the pathological changes been fully investigated. A rapid review of the subject as treated in various editions on the practice of medicine

reveals the slow progress of knowledge as to the clinical course. Thirty-five years ago only the disasters and complications of the disease were recognized. Nineteen years ago it was admitted that the majority of the cases were not recognized as such. Even five years ago only so-called typical cases are recorded.

The history of the gradual accumulation and correlation of facts and records, together with the names of the notable men who contributed to the advance in the fields of physiology, pathology, radiology, and clinical research are not necessary for the discussion of the therapy of peptic ulcer. But the conceptions that have arisen from the new discoveries, the correlation

* Read before the Kent County Medical Association, at Chatham, Ont., February, 1940.