RINKEL PRINCIPLES IN THE DIAGNOSIS AND TREATMENT OF ALLERGY

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With the passing of the late Dr. Herbert J. Rinkel the world lost a physician who had dedicated a lifetime to the diagnosis and treatment of human allergies. It is fortunate that he was a teacher, for even now, his work lives and his teachings are being carried out by many capable hands throughout our land. Courses are held every year by his former students to further, promulgate and even expand the scope of Dr. Rinkel's work in the field of allergy.

I believe it is an accepted fact that otorhinolaryngologists in general have paid very little personal heed to the field of allergy, which is so closely allied to their specialty.

Let us digress for a few minutes to consider some of the background of allergy in otorhinolaryngology. Our specialty for many years has given only "lip service" to the field of allergy. Some did not give that. There was animosity, if not open hostility, when the word was mentioned. Allergies were enjoyed only by the psychoneurotic and the very wealthy. This applied in particular to food allergies. Consequently a physician doing allergy was looked upon with disdain and many felt that he was practicing "fringe" medicine, or in some cases carrying on a deliberate "racket". These facts are well known to all of us. This thinking may have been inevitable at that time for the allergists of the world were certainly a "divided camp" in their teachings. How much could we believe and whose teachings offered the greatest clinical rewards?

Many of you may recall how the allergic noses were handled in this century during the twenties and thirties. Intra nasal surgery during this time was somewhat more than over enthusiastic. It was almost a surgical debacle. During this period, practically every allergic nose that walked into the specialist's office had some form of intra nasal surgery recommended. This might range from simple cautery of the turbinates to zinc ionization, to en masse removal of all intra nasal structures, to obliteration of all sinus cavities. Even the "virginity" of the naso-frontal duct was discussed pro and con. We are all aware of the results of this over enthusiasm. Many of these patients became permanent "nasal cripples."

As a reaction the pendulum gradually swung to almost complete conservatism in handling the allergic nose. To-day we would call it the "fanatic right wing." Fortunately it would now appear that the pendulum is near the center of it's arc in respect to surgery of the allergic nose.

It is my belief that the feeling now held by most of the rhinologists in this country is that conservative therapy combined with needed or "essential" intra nasal surgery will offer the greatest clinical rewards.

In reading most of our text books on Ear, Nose, and Throat one is still confronted with the usual medical therapeutic measures advocated in diseases of the internal nose and para nasal sinuses.

To enumerate a few we might list:

Bed rest.
Shrinkage and mild suction.
Diet.
Hormones and glandular therapy.
Proetz displacement.
Sprays, both oily and saline.
Ultra violet.
Air conditioning and humidifiers.
Inhalation therapy (both dust and vapors.)
Climactic changes.
Allergic management (hypo or desensitization.)

You will note that I listed allergic therapy last, for even though it may be the primary treatment indicated it is usually the one used the least. In most cases this will consist of the giving of anti-histamines, sprays and or some form of steroid therapy. Usually no thought is given to clinical testing or if it is, the patient is usually sent to some laboratory for "complete allergy tests." The antigens are then mailed either to the patient or the referring physician where a rather dogmatic or stereotyped dosage of injections are given without too much supervision or knowledge of expected clinical results. Reactions were commonplace. This method of practice is still being carried out by the majority of our rhinolaryngologists. We are guilty of failing to use to the fullest the tools at our disposal for the most enlightened practice of which we are capable.

My feeling is that the super specialists which we have become must give a realistic look at the problem confronting them. The surgical otologist, rhinologist, and laryngologist must then certainly agree that it is his duty to recognize, diagnose, and treat the allergies relating to his field. Preferably the testing must be done in his own office, and if this work is delegated to technicians then the physician must either have taught them or have a complete knowledge of the methods they are using.

It has been stated that over eighty percent of patients coming to see the oto-rhinolaryngologist have some form of allergy, either active or latent. Godlowski, in fact, has placed the figure much higher. It is his feeling that every individual has some form of allergy, either manifest or latent. He feels that the latent allergy is the ability of the body to respond to a crisis with protective enzyme formation and that this is a necessary mechanism to the survival of the organism. Minor allergic insults are probably handled with no or very little disturbance to the individual. If however the target organ or organs are overwhelmed with a given antigen and the organism is incapable of a sudden production of protective enzyme, then its end result is the sudden toxic or anaphylactic storm with which we are all familiar. This usually calls for immediate outside help.

There are a number of schools of thought in regard to the mechanism or mechanisms taking place during and following an allergic insult. I am sure there is some merit in each one.
It was Dr. French Hansel of St. Louis who pioneered the way in the management of allergic patients by the "minimal dosage" technique. He was highly successful and his teachings are the basis for present day therapy. The refinement of minimal dosage, along with an analysis of many bizarre testing reactions, and a great step forward in food allergies was then given to the world by Dr. Herbert Rinkel.
To me one of the great refinements came when Rinkel introduced the titration method of testing. It is to determine the so-called "end point of reaction." This is that whealing response which is induced by intracutaneous injection of the weakest dilution of an antigen, which produces a wheal 2 mm. larger than the next weaker nonreacting dilution. This endpoint of reaction should be followed by a wheal 2 mm. larger with the next stronger test solution.
From the end point the "Multiple" is derived, and this is the number of times the "x" is multiplied to obtain a treatment dose, i.e., a multiple of 5 is a 5x dose, or 0.05cc of the above end point dilution or it's equivalent.
With this multiple x dosage the optimal dose is determined to be the one which gives the most complete degree of relief. The period of relief may vary from 3 tot 21 days. The strength of the optimal dose may vary from a fraction of the "x" to various multiples of the "x". This dose will vary in different antigens and in different patients.
Above are the few basic principles in the clinical handling of the patients with inhalant allergies.
As regards food allergies Dr. Rinkel's work on the application of the Rotary Diversified Diet is well known. It was presented in 1934 and published in 1948. He recognized the cyclic and thermal factors and their intimate relationship to food allergies. He was one of the first to realize that one cannot use skin tests as an absolute diagnosis for food allergy. "The tests will not average giving a positive test in more than 20 % of the foods causing headaches in a series of patients." This facet of allergy became so intriguing to Dr. Rinkel that along with his Rotary Diversified Diet he perfected the "Deliberate Individual Food Test" in 1934, after having discovered the phenomenon of masking in 1932.
Finally the "Provocative Food Test" arrived on the scene. This test is defined as the deliberate intracutaneous injection of a patent food extract of sufficient quantity and strength that it will produce the accepted allergic symptoms.
In 1960 Dr. Rinkel devised the test which is now used exclusively with but minor variations. This test was based upon the use of Lee's original food desensitization technique.
The "Provoking Dose" is a series of tests made with a 1 : 5 dilution of the food extract concentrate. We place 0.05 cc of this material intracutaneously into two separate sites in a horizontal plane above the elbow on the lateral side of the arm. At the end of ten minutes, or if there has been no change in the symptom pattern, or if no symptoms have been induced, one may then inject 0.02 cc of the third 1 : 5 dilution of this same food extract. Observations are then continued for an additional ten minutes. As soon as a reaction is evident, the neutralizing doses are started with weaker dilutions of the same

antigen. Most patients have been found to be relieved with dilutions of 9 x or less. We place 0.01 cc of 9 x dilution intracutaneously, above the test sites. Ten minutes are allowed to elapse. If no change occurs, the dose is considered ineffectual and a stronger dilution (the 8 x) is applied in like manner, and repeated until the dilution in found, which relieves the patient's provoked symptoms.

At time one may find that the 9 x dilution may aggravate the symptoms. If this should occur it is recommended that 0.01 cc of two dilutions weaker which is the 11 x dilution, be applied. If this causes aggravation one goes two dilutions weaker to the 13 x dilution. If this should cause aggravation it is best to go to 0.01 cc of the 8 x, 7 x, 6 x, etc. until the symptoms are relieved.

SUMMARY

1. It is recognized that there are many techniques used in the diagnosis and treatment of clinical allergies.
2. A short resume of Dr. Rinkel's techniques has been given. These have proved to give a high degree of accuracy in diagnosis and a high degree of therapeutic relief of clinical allergy.
3. A plea has been made that every oto-rhinolaryngologist face up to his responsibilities in the field of allergy, as it pertains to their particular field of the speciality.

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