NASAL ALLERGY

Only thirty years ago, most Nasal complaints were attributed to Nasal Catarrh or to sinus infection. At that time, Sluder of St. Louis, was skillfully performing many Spheno-ethmoid and antral operations for facial neuralgias, nasal obstructions, chronic nasal and post-nasal discharge and other syndromes attributed to Sinus infection. Fortunately, he was careful to send his surgical specimens to the pathological laboratory and thus preserved for subsequent study the tissues removed at operation.

In his day, the high percentage of Eosinophilic lencocytes found in many of these tissue fragments was considered evidence of low grade infection. Now, thanks to the work of French K. Hansel, who reviewed his slides, and to that of other investigators, we know that a large percentage of these cases probably represented tissue reactions to food or inhalant allergens. Therefore, much of his surgery was probably unnecessary.

Today, sinus surgery is never carried out until an allergic basis has been considered and investigated it necessary. In those cases on a purely inflectional basis the results are excellent. In mixed types where external allergen have been excluded or discovered and treated and and hypersensitivity to bacterial products seems the alternative, results in some cases are spectacular. In others, less reliable.

These poor results may reflect defects in our diagnostic. The subject of Nasal Allergy is a broad one. Before this group it seems illogical to expand any one phase of the subject. Therefore, at the risk of repeating some of the facts that may be common knowledge, I hope that a Kaleidoscopic review of the subject from a personal standpoint may be interesting and perhaps stimulating.

I shall speak of allergy in broad terms and not only in the sense of atopy where circulating antibodies are theoretically demonstrable. In other words, allergy is herein considered as an abnormal tissue response to contact with substances, which are innocuous to the majority of individuals. These abnormal or hypersensitive responses bring about unpleasant and sometimes dangerous symptoms in susceptible individuals. Because it is interesting, I shall introduce some unproven and theoretical generalizations concerning the etiology of the subject. Perforce, I cannot cover all the major or minor phases.

In the field of otolaryngology, allergic reactions involve the lining of the nose and para nasal sinuses, the nasopharynx, Eustachian tubes, ears, oropharynx, and often spread to the larynx, trachea and bronchi.

Local symptoms in uncomplicated cases, consist of sneezing spells, nasal obstruction, nasal and post-nasal discharge, itching of the eyes, ears, nose and hard palate. Neuralgic pains in the face and head are often present. Discharge is usually watery or mucoid but may be puvulent at times. General symptoms may be marked fatigue, post prandial drowsiness,

nervousness, emotional depression, generalized aches and pains, extra systoles, hypertension and other phenomena, which vary with the shock organs involved. Attacks may be seasonal, spasmodic or perennial.

ETIOLOGY

Little is known concerning the exact brochemical mechanisms involved in the allergic reaction. There is evidence, that histamine may be released during the antigen-antibody reaction and thus produce its effects. Probably some other substance is active as well.

It is known that an imbalance between the sympathetic and para-sympathetic components of the nervous system is usually in evidence. Along with this an endocrine dyscrasia is often suspect, for as every clinician knows, the use of thyroid, supra-venal and ovarian hormones are frequently beneficial. In addition, one wonders if hepatic or pancreatic dysfunction may not play a part in permitting allergization through failure of their secretive or detoxicative functions.

The familial incidence of allergy leads one to include as of primary importance, a gene deficiency, perhaps involving one of the body's enzyme systems. Nutritional deficiency over one or more generations may be much more important than we realize; and to my mind may well be fundamental, perhaps causing changes in the genes. About 1920, Sir Robert McCarrison, published evidence that rats fed inadequate diets developed degeneration of their thyroids, adrenals and gonads, as well as ulcers and dysfunction of the gastro-intestinal tract. Others have since substantiated this work.

The high intake in England and this country of highly refined sugar and flour together with other processed foods; the impoverishment of our soil through erosion and strip-farming; the poor dietary selection of the average person; the poor cooking methods so often used; and other factors, may all contribute to the development of clinical and sub-clinical nutritional deficiency, and thus to widespread neuro-endocrine, cardio-vascular and gastro-intestinal dyscrasias. Other factors which favor sensitization are known. Allergic symptoms may occasionally follow acute febrile diseases, of which pertussis is the worst offender.

Surgical trauma may precipitate the onset of the allergic state. Gastro-enteritis, acute or chronic, may favor sensitization by increasing the permeability of the gastro-intestinal tract, thus allowing the body to be flooded with unsplit proteins, with which it is unable to deal at that time. Focal infection may be of utmost importance, either by sensitizing the nervous system, poisoning enzyme reactions, lowering the threshold to other allergens, or by setting up allergic reactions to the bacteria themselves or their products. Emotional trauma, acute or chronic, particularly anxiety states or frustrating situations, may precipitate and continue allergic reactions in sensitive persons. This to my mind is a summation effect. Patient + antigens

+ emotional tension = symptoms, removal of one of the triad may give relief. Inadequate rest and exercise, often associated with the speed of modern, urban living, play a part in lowering body tone. Chemical insults, including tobacco, alcohol, and modern drugs, cannot be disregarded. The effects of gasoline and factory smoke, arsenic, selenium and other toxic substances have yet to be evaluated.

Weather changes have been investigated by Wm. F. Peterson and others and play yet another important part. The immediate instigators of nasal allergy may be summarized as follows:

1. Inhalants -These are legion. Some of the most common are pollens, house dust, animal danders, feathers, orris root, glue, leather, ozite, wool, silk, newspaper dust, tobacco smoke, perfumes, soaps, and occupational dusts. Gas fumes and coal smoke may be serious offenders. Fungus spores are receiving increasing recognition. Odors from raw or cooking foods may cause marked symptoms. Nose drops must not be forgotten.
2. Ingestants-These include foods, beverages, medicines, vitamins and any other substance taken by mouth. Surprisingly enough, some patients highly sensitive to pork get reactions from the minute amount of unchanged protein found in gelatin capsules.
3. While this subject clinically is still undergoing heated debate, there is little doubt that bacterial allergy as such does exist. It has been proven experimentally that bacterial proteins can produce anaphylaxis. Therefore, focal infection is a live issue.
4. Sensitization to endocrine secretions or to products of pregnancy have been demonstrated. Endogenous allergens must be considered in difficult or obscure cases.
5. Sensitivity to physical agents such as cold, heat and solar rays occurs with varying frequency.

DIAGNOSIS

A complete and detailed history is of primary importance. Any patient complaining of a "cold" every few weeks may be presumed to be suffering from allergy until proven otherwise. Local examination during an attack discloses pale, boggy, wet turbinates with partial or complete nasal obstruction. Between attacks the mucosa may be a normal pink. Nasal and blood eosinophilia are usually present during, and sometimes between exacerbations.

Allergic manifestations in other parts of the body are often noted. Skin tests, both scratch and intrademal, are valuable when correlated with the history. Intradermal testing is both more sensitive and more dangerous. The reactions to inhalants are much more reliable than those to foods. The latter may be downright misleading. Positive tests to foods may mean past, present, or future clinical sensitivity. Contrariwise, clinical reactors may not necessarily give a positive skin reaction. Patients should never be told they are allergic to the foods which

give positive skin reactions, unless their significance is proven by clinical testing. Too many people follow restricted diets, unnecessarily, because of positive skin tests that were not verified in this way.

The Etiological significance of allergens is determined by:

1 Relief of symptoms during avoidance of suspected substances.
2 Reproduction of symptoms by exposure to them.
3 Renewed relief with avoidance
4 Relief by hypo-sensitization.
5 Relief by treatment of foci of infection with surgery, radio-therapy, vaccines, etc.

TREATMENT

1. Search for etiological factors.
2. Improve the general health by all possible means, including a balanced diet and an adequate intake of accessory food factors.
3. Search for and treat foci of infection.
4. Hyposensitize by injection of pollens, dust, molds and bactenals when indicated. Over dosage may be harmful and reactions should be avoided.
5. The use of elimination diets such as those of Rowe is valuable.
6. The pulse-diet method of Coca may solve some of the more obscure problems.
7. Endocrine therapy when indicated.
8. Non specific protein shock such as the use of auto-genous blood, typhoid vaccine, etc. Sometimes has limited usefulness.
9. Symptomatic therapy with ephedrine or anti-histaminics by mouth if causes can not be discovered. The latter drugs often lose effect after awhile and may be toxic if used for prolonged periods.
10. Uncover emotional tension. Discussion if often helpful. Calcium has been used empirically but is of doubtful value. Nose drops, containing shrinking agents are to be condemned except for short periods of time. The blood vessels in the turbinates sooner or later become fatigued and rebound relaxation may produce nasal obstruction worse than the original state. Privine is the most frequent offender in this respect.
11. Sub-mucous cauterization of the inferior turbinates may be helpful in the chronically obstructed nose.
12. Well developed nasal polyi, if present, should be removed. They always signify allergy, either to foreign substances or to bacteria present in the sinuses, or both.
13. Activ & Cortisone

CONCLUSION

Nasal allergy is widespread and probably on the increase. The etiology is not completely known and is complicated by many factors. Recognition and treatment are important, not only from the standpoint of the patient's immediate comfort, but to help prevent the development of asthma, with often enters the picture in many untreated cases. Purulent sinusitis is also prone to develop as a complication of prolonged obstruction of the nose and sinus ostia. While some children tend to "outgrow" allergy, the majority do not. Clinical allergy is detrimental to healthy development of the child. While some of these cases can be readily recognized, diagnosed and relieved of their complaints; others would tax the patience of Job. That, however, is no excuse for not making every reasonable effort to bring about a lasting solution to their problems.

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