

URTICARIA

An every day experience to all
practitioners

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GENERAL CONSIDERATIONS

Urticaria is dermatosis of particular interest, because of the many bizarre etiologic factors involved, as well as the fundamental symptoms encountered. It is a vascular reaction pattern of the skin, characterized by the rapid appearance of transient erythematous or whitish local swellings in the skin known as hives, wheals or urtica. It is actually localized edema. Unlike the dermatitis or eczema in which the lesions take place at the superficial part of the skin, the urticarial lesion is deeper in the dermis. Urticarial lesions are commonly pruritic, or may produce a stinging prickly sensation.

CLINICAL FINDINGS

The wheals are the primary lesions and established «diagnoses». It is elevated, edematous, sharply demarcated, erythematous or opaque white lesions surrounded by rose-colored or red areola or halo. Clinically the lesions may present extremely variable geometric configurations. They may be linear, oval, round, or polycyclic of firm consistency, in various sizes and shapes. (Usually the lesions are multiple.) Severe urticaria may induce bullous changes overlying the wheals, as commonly found in children.

The urticaria may be localized to one small area as well as over a large area. Areas of predilections are the trunk, extremities, palm, sole and scalp. At the looser parts, eyelids, lips, and external genital the swellings are larger and known as angioedemas or Quinckes edema.

The urticaria may be acute or chronic. Acute urticaria occurs over a period of days, or at most a week, followed by complete involutions. Chronic urticaria persists for months and sometimes even for years.

The most important complain is itching which, though varying in severity, is invariably present.

DIAGNOSIS

The most important single sign is the appearance, quite suddenly of edematous, smooth or irregularly shaped elevation of the skin or wheals of different sizes and shapes, covering more or less extensive area of the trunk. And the most single symptom is pruritus.

The reaction is not limited to the skin, since the mucosal surfaces may be involved, giving rise to such symptoms as coryza, asthma, abdominal pain and hoarseness. In the latter the edema of the larynx at times may necessitate tracheotomy and other heroic surgical intervention or therapeutic measures. It is unfortunate that cutaneous testing, particularly scratch and intradermal tests, affords almost no information of value especially in the study of chronic urticaria. In any case in which the cause is not self-evident, the two most prominent etiologic suspects are *drugs* and *foods*.

PATHOGENESIS

The study of the mechanism of the urticarial production has as its central figure the mast-cell. It has recently been proved that the mast-cell participates in all urticarial reactions; it is located about the finer cutaneous blood vessels and stores a reservoir of the powerful vasodilator substance, histamine. Any type of physical or chemical damage to this cell will result in a sudden out-pouring of histamine, which cause a localized increase in the capillary permeability. Accordingly, serum proteins and fluid pass into the dermis in abnormally large quantities. This serous effusion remains for a period of time because of the deranged pressure relationship in the tissue fluid spaces. Gradually this fluid is absorbed, and the wheal slowly resolves. Edema is the only change, therefore the lesions involute without any of the sequential changes. The depleted mast-cell gradually reforms histamine, but it is significant to note that there is a period in which the mast-cell histamine level is insufficient to produce the further urtication. A period of time is needed.

There is unfortunate but very popular tendency to regard all urticarial reactions as allergy. Actually urticaria may be allergic as well as nonallergic in nature. During the process of whealing it is possible to demonstrate histologically that the mast-cell granules are depleted or that they disappear. These granules contain the histamine and heparin which are responsible for the cutaneous signs which develop. The mast-cell is very sensitive, and amazingly large number of chemicals cause the release of histamine from it. Normally, some factors directly stimulate the mast-cells, other factors on the other hand produce allergic or immunologic reactions in the syntheses of the IgE antibodies, and the results of the reaction of allergen with IgE on mast-cell is the release of histamine. It is interesting to compare urticaria and purpura, since both resulted from an increase in capillary permeability. The fundamental difference between the two is simply one of degree. The permeability changes in purpura are of so great as to permit the actual extravasation of red blood cells.

Urticaria has long been known to be a reaction pattern of the skin which may be produced by considerable number of individual cases, and hives which are diagnosable at a glance may necessitate the employment of every possible clinical and laboratory tool to determine their cause. Though in fact, in many instances, the cause is not determinable.

TREATMENT

There are a number of effective medical measures to counteract the action of histamine. They are specific in the sense that the effect of histamine are reduced or abolished, but they are not primary modes of therapy since they do not eliminate the cause. They are eminently successful in the treatment of any acute self-limited urticaria in which the allergen or urtica-riogenic agent is destroyed and eliminated by the body, and future exposure does not occur. However, in the case of chronic urticaria, their continuous use is necessary, and at times a state of refractoriness to them develops.

Epinephrine has been effective and long used as pharmacological antagonist of histamine and produces temporary remission of urticaria, as it is rather rapidly destroyed by the body, being oxidized enzymatically, so that repeated administration is usually necessary.

The antihistaminics

Within the last two decades, the antihistaminic group of agents has provided a superior method of combating urticaria. The earliest described members of this group were Benadryl and Pyribenzamine, and at least a score of other effective antihistaminics have been developed subsequently. Recently some compounds have been synthesized in which the action has been felt to be greater duration. At times it is necessary to chose one or another of the antihistaminics, since side-effects of nausea, vertigo or fatigue and drowsiness may be produced in some patients. In some individuals one antihistaminic may be more effective than another. Antihistaminic therapy is of limited value, since it is not possible in many instances to produce a sufficiently high concentration within the blood stream to neutralize the great quantities of histamine completely or effectively. Antihistaminics are effective only when given by mouth or by injection. They are completely ineffective when applied topically in the form of lotions or creams *in the treatment of urticaria*. The skin permeability is such as to prevent any appreciable quantity of antihistaminic from entering the intact epidermis overlying the urticarial wheal.

The corticosteroids and corticotropins are third major class of weapons which may be used judiciously in the treatment of urticaria. The effect the permeability of the capillaries and counteract the effect of histamine. But these agents are of potential danger, so that their use should be restricted to severe-urticaria, and are the single most effective measure of reducing an acute attack. Before of little value in «curing» *chronic urticaria*.

The urticarial reactions occur deep in the skin, therefore it is not surprising that topical therapy is of relatively little or no value; despite this, most patients find that the local use of simple wetting lotion or a colloid bath is definitely *comforting*.

In long-standing chronic urticaria in which no clues are elicited as to specific causal factors, it is well to investigate the psychiatric status of the patient. Psychotherapy may be indicated.

It is questionable whether any of the formerly popular remedies have a true place in the modern management of urticaria. Such uncertain methods as autohemotherapy, histamine desensitization, administration of calciumgluconate and purgatives and charcoal absorbents by mouth may be included in the list of older methods of treatment which, *we believe, should be discarded.*

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