



Figure 1. Urticaria and angioedema. Cholinergic urticaria (**1a**), chronic idiopathic urticaria (**1b**), angioedema of the distal part of the tongue (**1c**) and symptomatic dermographism (**1d**). Figures 1b, c and d contributed by M.W. Greaves.

Comment: The morphological appearance of wheals is somewhat dependent on the clinical type of urticaria: wheals are plentiful, small, whitish and surrounded by an erythematous rim in cholinergic urticaria; in chronic idiopathic urticaria, they are larger, dull red and fewer in number; in dermographic urticaria, they are distributed along the tracks of friction (e.g. "writing"). Angioedema represents edematous swellings of deep tissues.

Treatment

General measures include loose clothes, cool environment, and avoidance of alcohol and aspirin.

For *acute urticaria* the treatment is removal of the cause and administration of an antihistamine. Patients may occasionally get mouth or throat swellings due to angioedema, with or without faintness or collapse. A drug is often the culprit and the patient should be taken to the nearest hospital accident and emergency room for emergency treatment.

When *chronic urticaria* is due to a physical urticaria the patient should be advised that investigations are unnecessary. Change of lifestyle (avoidance of vigorous exercise or stress in cholinergic urticaria, or of sun exposure in solar urticaria) is helpful, and antihistamines are usually effective.

Chronic idiopathic urticaria with or without angioedema is also treated by antihistamines. The low sedation antihistamines (cetirizine, loratidine) are usually adequate. Frequently itching is troublesome at night, and a sedative antihistamine such as hydroxyzine, administered before bedtime is useful. However patients need to be advised that impairment of driving skills persists well into the next day, even when subjective drowsiness has worn off. For severely affected patients resistant to antihistamines, especially those with proven autoimmune urticaria, immunomodulatory treatments are available.

Hereditary angioedema is treated by attenuated androgens prophylactically and by intravenous fresh frozen plasma or commercially available C1-inactivator during acute episodes.

Significance

Acute urticaria is rarely a major problem; the cause is often evident and the outbreak short-lived. Chronic urticaria and angioedema follow an unremitting or relapsing course. Patients have been shown to suffer impairment of quality of life comparable with that due to triple coronary heart disease. Establishing the correct diagnosis (physical urticaria, autoimmune, non-autoimmune idiopathic urticaria and angioedema) is crucial in order to offer a prognosis and appropriate treatment.

Anaphylaxis

M.W. Greaves

Definition

Anaphylaxis is an acute systemic allergic reaction associated with a fall in blood pressure and breathing difficulty and with a potentially fatal outcome. A clinically similar non-allergic reaction can occur in response to certain drugs and insect venoms and is termed pseudoanaphylaxis. Anaphylaxis or pseudoanaphylaxis occurs in 1:10,000-1:20,000 people per year.

Clinical features

Anaphylaxis is commoner in atopic patients (*i.e.* patients with a history of asthma, eczema or allergic rhinitis). Attacks occur suddenly with anxiety, wheezing, breathing

difficulties, sweating, pallor, cyanosis and palpitations, faintness and loss of consciousness. Anaphylaxis is often accompanied by generalised itching, urticaria and/or angioedema and the latter may affect the mouth, throat or larynx, causing stridor.

Aetiology

The reaction is caused by extensive activation of tissue mast cells leading to release of histamine and other vasoactive mediators. True allergic anaphylaxis results from a combination of specific allergen with IgE antibodies on the mast cell surface which causes the cell to degranulate, releasing its content of histamine into the circulation. This causes capillary leakage and vasodilation resulting in cardiovascular collapse and angioedema. Common allergens include latex, peanuts, bee or wasp venoms and drugs such as penicillin. Minute amounts of allergen are sufficient to provoke attacks. For example latex-sensitive patients have suffered anaphylaxis due to ingestion of food prepared by a food handler wearing latex gloves. Pseudoanaphylaxis occurs when drugs cause mast cell degranulation without participation of an allergic mechanism. These include morphine, radiocontrast media, aspirin and muscle relaxants.

Treatment

Anaphylaxis is easily treatable and, provided treatment is received promptly, most patients fully recover. Adrenaline injected intramuscularly is the mainstay of treatment and can be given repeatedly at 10 minute intervals if necessary. An antihistamine such as chlorpheniramine should be given by injection concurrently. Hydrocortisone can also be given by injection since, although its action is slow, it probably reduces the frequency of relapse. Oxygen and intubation should also be used in the event of significant breathing difficulties.

Significance

The development of an anaphylactic reaction is frightening for the patient, relatives and medical personnel alike. However fatalities are surprisingly rare and generally occur if the patient has no access to trained medical personnel. Thus patients with a history of anaphylaxis should preferably not travel to remote regions unaccompanied. They should also wear a medical alert bracelet and be trained to self-administer adrenaline in an emergency. Proprietary "fail safe" products are available for this purpose.

Acne vulgaris

W. Burgdorf

Definition

Acne vulgaris, usually referred to as just acne, is an extremely common inflammatory skin disease, involving primarily the face and trunk, and affecting almost every adolescent (*figure 2*).

Clinical features

The appearance of acne is known to every reader. Acne is a disease of a specific type of hair follicle – the pilosebaceous follicle – and thus is only found where hair follicles have relatively small hairs and large sebaceous or oil glands. In most instances, this means acne is confined to the face and upper trunk. Thus, it is an extremely visible disease. The primary lesions can be identified by every patient; they include occluded hair follicles (comedones, known as blackheads or whiteheads, depending on their colour), pus-filled small papules, and larger deeper more inflamed nodules. Acne lesions tend to heal with scarring.

Etiology

The cause of acne is incompletely understood. Key factors include hormonal changes (explaining the onset in puberty in most instances), sebum overproduction, occlusion of hair follicles, alteration of the normal bacterial inhabitants of the follicles, and an exuberant host inflammatory response to the follicular changes. Acne can also be caused by occupational exposure to a variety of chemical, most notoriously halogenated hydrocarbons.

Treatment

One of the hallmarks of acne patients is ineffective self-treatment. A vast array of the over-the-counter products are available, many of which are of questionable effectiveness. In addition, manual extraction of comedones by cosmeticians is widely practiced, even though it has clearly been shown that the comedones soon recur. Finally, the general public still believes widely in "acne diets", even though there is no scientific evidence for this approach. The mainstays of acne treatment should be topical keratolytic agents designed to stop follicular blockage, as well as topical and systemic antibiotics and disinfectants to inhibit undesirable follicular bacteria. More severe cases of acne may require the use of systemic retinoids, modified forms of vitamin A, which exert a profound and almost miraculous effect on acne, helping cure even the most severe cases, but with one shortcoming. They are teratogenic, capable of damaging a fetus in the uterus, and may be employed only if adequate contraceptive measures are taken. Prompt treatment of acne is always essential to try and minimize scarring.

Significance

Acne is a major public health problem for many reasons:

- 1) It is extremely common affecting almost everyone. It is estimated that 50% of adolescents have clinically apparent acne and that 15-25% will seek professional help for their acne. Adolescence is not an easy time, even with clear skin, but the psychosocial effects of acne are hard for someone not having experienced this problem to fully appreciate.
- 2) Many different physicians try their hand at treating acne. Mild cases of acne can be managed by motivated family physicians and pediatricians, but only dermatologists are trained to manage moderate to severe cases. Prompt excellent management is essential to help teenagers during a difficult time and avoid scarring.