INFLAMMATION: ITS CAUSE AND TREATMENT.

By MISS L. GODDARD, S.R.N.

Inflammation may be due to many causes, the commonest being bacterial infection; or it may be due to mechanical violence, chemical injuries, pressure, excessive heat or cold, electrical injuries, sunlight, gout or rheumatism.

Inflammatory diseases of the organs of the body are described under their specific names, as peritonitis, pneumonia, inflammation of the mucous membranes of the stomach and bowels, cellulitis, neuritis, and gastritis.

When inflammation attacks an external or visible part of the body, such as when a splinter of wood or some other foreign body enters the flesh of a healthy person, there is at first an irritation caused by its influence on the nervous system, which is succeeded by pain and redness due to increased circulation. Should the inflammation become more intense, febrile symptoms may occur due to a change in the vascular and nervous system, but this is usually due to infection and not to inflammation.

Swelling, heat tenderness of the part, and loss of function may quickly follow.

All the symptoms are caused by the dilation of the small blood-vessels at the part affected, thus causing the blood to flow much faster and so producing the redness. Gradually the blood slows, and congestion occurs, causing many leucocytes, lymph and some red blood corpuscles to adhere and to pass from the blood vessels.

Swelling is due to the distension of the blood vessels and also to the effusion of the fluids.

Pain may be due to the blood plasma passing through the walls of the vessels and pressing on nerves; it may vary from a mere discomfort to an intense agony.

The lymph and leucocytes which escaped from the vessel walls dilute the poison of the micro-organisms; some of the leucocytes meet the bacteria and proceed to devour them, some being killed in the process, and, with them, dead tissue, and blood plasma, become liquid and form pus and an abscess may be formed.

If an abscess is forming, heat is applied to increase the circulation and help to promote absorption by assisting in the return of the lymph to the blood stream, thus removing the inflammatory waste from the tissues; or if the abscess has formed, this allows it to develop more quickly and also eases the pain.

If no wound is present, such as in the case of a sprained ankle, cold compresses are applied which cause constriction of the blood vessels and also limit the escape of the lymph which causes the swelling, thus arresting the inflammation.

Inflammation may therefore end by the tissue returning to the normal condition or by an abscess forming or scarring taking place.

Treatment.—Remove the cause if possible, rest the inflamed part, and apply cold compress or other cold application in the early stages, as later on it will have no effect.

A cold compress can be applied by a double layer of lint or similar material wrung out of ice water and lead lotion, changing it as frequently as every 15 minutes. The compress must not be allowed to become warm.

Evaporating lotion may be used on a double layer of lint wrung out of the lotion and applied to the affected area and lightly bandaged; a cradle is used to keep the bedclothes from the dressing, to allow a current of air to pass over it and thus evaporate the lotion.

Or an ice-bag may be ordered in which small pieces of ice are broken and their edges rounded off by running water over them; salt is added to prevent the ice melting too quickly. The bag is filled one-third full and the air expelled. It is then suspended from a cradle over the part affected.

An ice poultice is also sometimes used. In this instance, a sandwich is made of salt and ice broken into small pieces and laid on a thin layer of wool, which is placed between some guttapercha, the edges sealed either with chloroform or turpentine smeared along the inner edges.

When ice is used as a compress, ice-bag, or poultice, a layer of lint should always be placed between the skin and the application, and renewed as soon as the ice melts.

Treatment for chronic inflammation is usually a counter-irritant to the skin surface, rest, and, if the cause can be found, the removal of it.

Hot-air treatment and massage and pressure by bandaging will sometimes help, apart from blistering agents, Scott's dressing, and Unna's paste.

Counter-irritants are used to relieve and cause congestion of the part affected. They act upon the nerves which regulate the size of the blood vessels.

Bier's method of cupping, in which a rubber bulb is attached to a cup, also induces increased reaction of the tissues,; also Bier's bandage, which is made of rubber and is sometimes used by being applied well above the inflamed area on the limb, tight enough to constrict the blood vessels but not the arteries, for short periods at a time.

Cantharides, which is obtained from dried beetles, is sometimes used as a blistering agent. It should never be applied over a bony part.

The plaster is cut as required and the area well cleaned, usually with methylated ether, the plaster is warmed and applied, over which a light dressing such as lint is placed and loosely strapped on.

When the blister has formed, which is usually overnight if the area is small, it should be punctured, not cut away, and olive oil applied to remove any traces of the blistering agent and the area dressed daily till healed.

Acetic acid, ammonia, and chloroform are used in some cases, by soaking lint the size required over the area and then covering it all with a watch-glass till a blister forms.

Iodine is often used according to its strength. If it is a strong solution, the area is painted over once a day; if weak, it may be painted two or three times in succession, but the iodine must dry each time before the next coat is painted on.

previous page next page