period—the incubation period—which varies from twenty-four hours to a week, though two or three days is much the most common, no signs appear, but when incubation is finished the temperature rises sharply to 101 degrees or more, and the patient is very cross and irritable, and has an intense headache and sore throat. On the second day (usually) a rash appears, in the form of a scarlet blush on the cheeks and chest, spreading thence on to the trunk and limbs. The forehead and triangle round the mouth and nose are never affected, but on the chest the eruption generally, though by no means invariably, becomes punctiform—that is to say, it breaks up into little red dots, which are usually most marked in the axillæ, and (if the trunk is also affected) in the groins also. On the arms and legs the dots are coarser, but the rash is always in the skin itself, and not upon it—that is to say, the spots are not raised. When the skin is pressed so as to drive the blood from it the rash disappears, and returns when the pressure is relaxed. The eruption is followed by desquamation, or peeling of the skin, which may commence as the rash fades, or may be delayed for any period up to three weeks. On the trunk and limbs the skin comes off in the form of little rings, but on the hands and feet it is more usually shed in large flakes. Desquamation is generally completed in about six weeks.

The appearances in the throat vary according to the severity of the attack. In mild cases all that is seen is a bright redness of the tonsils and soft palate, with, it may be, a little soft yellowish deposit on the former. In severe attacks the tonsils and the soft palate become ulcerated and eaten away, their surface being covered with leathery-looking sloughs. The temperature—in the absence of complications—is proportional to the intensity of the inflammation of the throat, and declines as this abates, reaching the normal in the average case at about the end of the first week. When this occurs the patient as a rule feels fairly well, and resents being kept in isolation for the further four or five weeks which elapse before he is free from the risk of communicating infection to others. Though there is no evidence that the flakes of skin are infectious in themselves, the patient is usually capable of transmitting infection until desquamation is completed, the disease being probably conveyed through the breath and secretions.

Let us now return to the pathology of the disease. The organisms lodge in the first instance in the tonsils, so that the throat is the site of the manufactory of toxins, with which the blood becomes charged, and we can liken the sloughing of the tonsils to the devastation that occurs on a field of battle itself, inasmuch as in warfare it does not matter so much what happens to the field itself, the important point being which army goes on to ravage or protect the neighbouring country—that is to say, the patient's system. In the great majority of cases of scarlet fever the germs themselves do not spread beyond the throat and its immediate neighbourhood, but in some—the so-called malignant cases—streptococci may be found in the circulating blood itself. Sometimes these are so intense that the patient dies, with his blood saturated with organisms, before the rash has had time to appear. It is better to call this type toxic scarlet fever, as the term "malignant" is often applied to any case of more than average severity.

The eruption is due not to an inflammation of the skin but to the effect of the circulating toxins on the smaller blood-vessels, which it causes to dilate, so that the area of skin which they supply is flushed and unduly full of blood. The toxins are also responsible for the fever and headache.

If, however, the throat is intensely inflamed, the organisms may travel along the Eustachian tubes to the middle ear—giving rise to inflammation, which shows itself in a discharge from the external ear—or into the nose, so that pus is seen to issue from the nostrils—or along the lymphatic vessels into the glands of the neck, which sometimes then break down into abscesses; all these phenomena making up the type of case which we call septic—which is rather a better name than the old-fashioned "Scarlatina Anginosa."

As we have seen, in the ordinary case the patient is practically well when the inflammation of the throat and the pyrexia have subsided, but this does not always occur, and there are certain events which we call complications which sometimes supervene, and all of which are of much greater importance than the original attack.

The first of these is the inflammation of the middle ear, which we have just noticed, and this is dangerous in two ways. Firstly, the inflammation may spread from the ear itself to the surrounding bone in the mastoid process, and thence to the brain or its coverings, so that death may result from meningitis or an abscess in the substance of the brain itself; or more or less permanent deafness may follow after the inflammation of the ear has subsided, this being usually due to obliteration of the canal of the Eustachian tube by adhesions.

Or the kidneys may suffer from a form of nephritis. This is due to two factors: firstly,

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