

A GUIDE TO MEDICAL AND SURGICAL NURSING.*

CHAPTER VIII.—THE INFLAMMATORY PROCESS.

IN order that you may be able to nurse Surgical cases intelligently, you must, in the first place, have some idea of what is meant by inflammation, or, to use simple language, a process of burning.

Inflammation may be produced by a variety of causes; for example, by a thorn in the finger, continued pressure on the hand (such as takes place in rowing for any length of time), or by a severe blow, as you will often meet with in cases of railway accident. A certain amount of inflammation is necessary in every wound in order that it may heal; and without this necessary inflammation no wound would heal, or fracture unite; but this healthy inflammation may go on through stages which are no longer healthy.

There are four *signs* of inflammation, viz., pain, redness, heat, and swelling, and there are also four *stages* of inflammation. These are:—

First, effusion, in which serum (the watery part of the blood) exudes.

Secondly, suppuration, or the formation of matter.

Thirdly, ulceration, which is the destruction of tissue, or molecular death.

Fourthly, gangrene, or death of the whole part.

It is quite possible for what is at first a mere swelling to go on until it becomes gangrenous. You sometimes see examples of this when fractures are bandaged too tightly.

There are many theories as to the reason why an inflamed part looks red, and why serum should exude; but all are agreed that it proceeds from some change which takes place in the blood vessels. The capillaries get so full of blood in an inflamed part, that the blood, not being able to proceed, is blocked up, and the circulation stops. Then presently there is a giving way of the tissues, and blood, serum, or leucocytes exude.

Now we will return to the four *symptoms* of inflammation. First, the part is red. The capillaries get full of red blood. Nevertheless I must tell you that some forms of inflammation are not red, but dark purple or dark brown; this is where the blood is not properly *arterialized*—where it is venous. Secondly, the part is swelled, because there is too much blood. Thirdly, the pain is due to tension—matter forms and cannot escape. Fourthly, the heat is first produced in the part affected, and then extends to the patient generally,

* These articles are partially from the pen of the late Miss Alice Fisher and Mrs. Norris, and will eventually be published in book form, being revised by the latter

and the temperature rises. The reason that this elevation in the general temperature takes place is, that the inflamed part acts on the whole system, much in the same way that you have seen a small stove able to influence a long series of hot-houses, with which it is connected by pipes.

Severe wounds and operations are often followed by what is known as surgical or inflammatory fever; and it will be well to consider the way in which this affects the patient's system generally.

With regard to the *vascular* system (blood vessels), we find the pulse raised perhaps twenty or forty beats from the patient's normal one, often irregular, with a character of tension, a flushed face, and temperature elevated probably four degrees.

The symptoms of disturbance of the nervous system are restlessness and general *malaise*, headache, wandering, first in sleep, followed by delirium in the day, and coma. The digestive system remains in abeyance. There is no appetite; and if food is taken in spite of this, it probably causes sickness and diarrhoea, from being undigested. It is best for a Nurse not to force or persuade a patient in such a case to take food.

Of the secreting and excreting organs, the skin and kidneys are most likely to be deranged. If the skin feel hot and dry, a Nurse should endeavour to induce perspiration by the application of hot bottles, and may also administer a hot drink. If the kidneys cease to operate, blood poisoning may take place, and the patient may die in twenty-four hours. A hot poultice over the lumbar regions may help to restore their functions. The tongue becomes rapidly coated, and eventually dry. The last stages of inflammatory fever generally affect the nervous system. In ordinary cases, the fever will remit in course of time, and the patient get well.

Pyæmia is a terrible, but fortunately only an occasional, termination to Surgical cases. Pyæmia, or blood-poisoning, is due to the presence of pus in the blood. In this disease, the patient's chances of recovery are *much* less than in inflammatory fever. The first symptom is a rigor; but you must remember that a rigor is not invariably followed by pyæmia. It may be produced by ague, or occasionally by urinary disturbance; but in a Surgical Ward a rigor is a very alarming thing. A rigor consists of a shiver followed by a perspiration. The patient will complain of cold, and yet to you, he will feel very hot, his temperature will be high, and his pulse faint, small, and weak. The rigor lasts ten or fifteen minutes, and is followed by an intense and exhausting perspiration. An abscess will in all probability soon form in lung, liver, kidney, or joints. Perhaps within forty-eight hours, rigor No. 2 will take place, as

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