

Freshly dried blankets and garment must be kept warm for frequent changes; also, covered rubber hot-water bottles must be ready; these, if placed near the joints, may relieve the pain.

The patient should be nursed flat; sometimes a very soft pillow is allowed. The patient must be moved from side to side, and all bony prominences carefully attended to; an air-ring will be useful.

During the first six weeks of illness the patient must not exert himself, and will require feeding, at first with water, barley water, orange juice or lemonade, during the time pyrexia is present. Later, an easily digested diet is given consisting of milk, eggs, custards and jellies, and during convalescence, fish and milk puddings. No meat is given.

At the end of these six weeks the patient may sit up for his meals, supported by three pillows, and is allowed to feed himself, if there are no complications.

The mouth and teeth should be kept clean, the bowels regular.

The urine should be tested on admission and then weekly for albumin.

The temperature, pulse and respiration will be taken four-hourly.

At the end of the tenth or twelfth week the patient is allowed up for five minutes at first, the time being increased gradually by five minutes each day until he is allowed to walk.

No excessive exercise is allowed for about six months.

As it is a depressing illness, the nurse must be very quiet, gentle and cheerful, and above all, have unlimited patience.

## MODERN METHODS IN THE TREATMENT OF WOUNDS.

### SULFANILAMIDE INJECTIONS AND THE THOROUGH CLEANSING OF WOUNDS. NEW METHODS. WORKING UPON THE GERMS FROM THE INTERIOR OUTWARDS.

An article dealing with the modern treatment of wounds, by Dr. Bertagnoni has been published.\* In view of the timeliness of this subject, our readers will be interested in a summary of the new tendencies in this field of work.

The author of the article sets down his ideas as follows:—

The disappointments experienced during the war of 1914-18 in the realm of military medicine prove, once again, that in medicine, as in all other branches of applied science, previously acquired experience and theoretical knowledge are not always sufficient to forecast the way in which the medical battle will develop in a future conflict. Each war creates a new situation; symptoms of diseases believed latent reappear, and methods hitherto found efficacious prove quite ineffective in face of the new needs created by fresh and untried methods of war and varying conditions due to climate, diet and the different races in conflict. To keep to the field of surgery alone, tetanus, gaseous gangrene and all the common surgical infections were the most frequent causes of disasters in the past, owing to the shortage of anti-tetanus serum, ignorance of the true nature of gangrene, and an excessive trust in antiseptic methods, which were ineffective and interfered with the process of healing.

Profiting by this hard lesson, we have to-day succeeded in perfecting treatment for gangrene and intensifying the production of anti-tetanus serum. In addition, new

methods have been adopted for the prevention and treatment of surgical infections. The first of these methods is the use of sulfanilamides, which, according to the most reliable authorities, have been recognised as especially efficacious in preventing the infection of wounds. It is a fact that the very low percentage of deaths among the wounded in the present war is due to the use of this method, which prevents the development of infection, avoids amputations and enables the wounded to be transported to hospitals far from the front lines. Since injuries caused by shells and hand grenades rarely cause immediate death, it is recognised that death is usually due to streptococcal infection. Formerly, to prevent such infection from setting in, it was necessary to operate upon the wounded in the front lines; to-day, the task of the army doctors at the front has been reduced to the simple gesture of injecting a compound of sulfanilamide. Wounds thus treated and then sealed in plaster have been described as being "frozen." They may remain in this state for more than a week, until the time when an experienced doctor behind the lines may be able to see to them in quiet and safety. These injections may also be given when the wounds are already infected, since they render the microbes vulnerable and more readily destroyed by the phagocytes. To-day, the production of sulfanilamides is no longer limited to Germany, France and Great Britain; in Italy, important pharmaceutical concerns are producing sulfanilamides which are equally effective and which are constantly being perfected, with a view to their ever wider application.

#### DESTRUCTION OF GERMS.

With regard to the new methods of treatment of wounds, even of those which are deep and infected from the outset, mention should be made of the method of "cleaning out" the wound, that is to say, the careful and minute cleansing and trimming which, as Gosset remarked some time ago in the *Monde médicale*, should be applied tirelessly to every part of the injury, in order to remove all foreign bodies as well as any devitalised tissue which might likewise become a source of infection. This is a by no means superficial treatment, but a real surgical operation, and the replacing of the antiseptic by the aseptic method, the latter's aim being not to destroy the pathogen microbes but to remove them from the wound so as to prevent infection.

To take a further step forward, let us imagine a method which surpasses both of these ideas; not to sterilise the tissues, for fear of destroying them and delaying healing; nor, in order to get rid of insidious agents, to resort to long surgical operations, which are painful and never sure; in other words, no longer resort to methods which act only from the exterior, but only to those which act from the interior. This is the principle expounded by Benedetto Schiassi in two articles which appeared recently in *Policlinico*. Already in 1914-1915, this surgeon, who was also a great scholar, had arrived at the conclusion that it was useless to try to disinfect deeply infected wounds by local applications of antiseptics, and that it would be better to fight the germs by working from the interior outwards, through the injection of efficacious substances into the veins, or even into the arteries, from whence they would reach the tissues. Later, this method was adopted by Leriche in France. Schiassi, however, was convinced that the destruction of pathogen germs in wounds by antiseptics was only possible when the infection was at the surface, and not when it had already penetrated to the living cells. In this case, as can, indeed, be observed in the course of an inflammatory process, the live cells have already enveloped the invading microbe in a kind of capsule which keeps it from direct contact with the antiseptic substance. Since it is hopeless to try to destroy the microbes in an inflamed area by means of disinfectants, either externally, by local applications, or internally,

\* "Corriere della Sera," September 16th, 1940.

[previous page](#)

[next page](#)