or more) and at first full, but later on feeble. Its condi­tion as indicating the strength of the heart’s action is watched with anxiety. The tongue, at first coated with a white fur, soon becomes brown and dry, while sordes (dried mucus, &c.) accumulate upon the teeth ; the appetite is gone and intense thirst prevails. The bowels are as a rule constipated, and the urine is diminished in amount and high-coloured. The physician on examination may make out distinct enlargement of the spleen. (3) The third stage is characterized by the appearance of the *eruption* which generally shows itself about the fourth or fifth day or later, and consists of dark red (mulberry coloured) spots or blotches varying in size from mere points to three or four lines in diameter, very slightly elevated above the skin, at first disappearing on pressure, but tending to become both darker in hue and more permanent. They appear chiefly on the abdomen, sides, back, and limbs, and occasionally on the face. Besides this, the character­istic typhus rash, there is usually observed a general faint mottling all over the surface. The typhus rash is rarely absent and is a very important diagnostic of the disease. In the more severe and fatal forms of the fever, the rash has all through a very dark colour, and slight subcutaneous hæmorrhages *(petechiæ)* are to be seen in abundance. After the appearance of the eruption the patient’s condition seems to be easier, so far as regards the headache and discomfort which marked the outset of the symptoms ; but this is also to be ascribed to the tendency to pass into the typhous stupor which supervenes about this time, and becomes more marked throughout the course of the second week. The patient now lies on his back, with a dull dusky countenance, an apathetic or stupid expression, and con­tracted pupils. All the febrile symptoms already mentioned are fully developed, and delirium, usually of a low muttering kind, but sometimes wild and maniacal *(delirium ferοx)* is present both by night and day. The peculiar condition to which the term “ coma vigil ” is applied, in which the patient, though quite unconscious, lies with eyes widely open, is regarded, especially if persisting for any length of time, as an unfavourable omen. Throughout the second week of the attack the symptoms continue unabated ; but there is in addition great prostration of strength, the pulse becoming very feeble, the breathing shallow and rapid, and often accompanied with bronchial sounds. (4) A *crisis* or favourable change takes place about the end of the second or beginning of the third week (on an average the 14th day), and is marked by a more or less abrupt fall of the temperature *(vide* chart) and of the pulse, together with slight perspiration, a discharge of loaded urine, the return of moisture to the tongue, and by a change in the patient’s look, which clears up and shows signs of returning intelligence. Although the sense of weakness is extreme, convalescence is in general steady and comparatively rapid.

Typhus fever may, however, prove fatal during any stage of its progress and in the early convalescence, either from sudden failure of the heart’s action—a condition which is specially apt to arise— from the supervention of some nervous symptoms, such as meningitis or of deepening coma, or from some other complication, such as bronchitis. Further, a fatal result sometimes takes place before the crisis from sheer exhaustion, particularly in the case of those whose physical or nervous energies have been lowered by hard work, inadequate nourishment and sleep, or intemperance, in all which conditions typhus fever is apt to assume an unusually serious form.

Occasionally troublesome sequelae remain behind for a greater or less length of time as the effects of the fever. Among these may be mentioned mental weakness or irritability, occasionally some form of paralysis, an inflamed condition of the lymphatic vessels of one leg (the swelled leg of fever), prolonged weakness and ill health, &c. Gradual improvement, however, may be confidently anticipated and even ultimate recovery.

The mortality from typhus fever is estimated by Murchison and others as averaging about 18 per cent. of the cases, but it varies much according to the severity of type (particularly in epidemics), the previous health and habits of the individual, and very specially the age,— the proportion of deaths being in striking relation to the advance of life. Thus, while in children under fifteen the death-rate is only 5 per cent., in persons over fifty it is about 46 per cent.

The treatment of typhus fever includes the prophylactic measures of attention to the sanitation of the more densely populated por­tions of towns. The opening up of cross streets intersecting those which are close-built and narrow, whereby fresh air is freely admitted, has done much to banish typhus fever from districts where previously it was endemic. Further, the enforcement of the law regulating the number of persons accommodated in common lodging-houses, and the application of the powers now vested in local authorities for dealing with eases of overcrowding everywhere, and for isolation and treatment of the infected, have had a like salutary effect. Where typhus has broken out in a crowded dis­trict the prompt removal of the patients to a fever hospital and the thorough disinfection and cleansing of the infected houses are to be recommended. Where, on the other hand, a single case of acci­dentally caught typhus occurs in a member of a family inhabiting a well-aired house, the chance of it being communicated to others in the dwelling is but small ; nevertheless every precaution in the way of isolation and disinfection should be taken.

The treatment of a typhus patient is conducted upon the same general principles as have been illustrated in other fevers (see Scarlet Fever, Smallpox). Complete isolation should be main­tained throughout the illness, and the services of a day and a night nurse procured, who should keep a strict watch and preserve a record of the temperature and other observations, the times of feeding and the form of nourishment administered, as well as every other fact noticed, for the physician’s information. Due attention should be given to the ventilation and cleansing of the sick chamber. The main element in the treatment of this fever is good nursing, and especially the regular administration of nutriment, of which the best form is milk, although light plain soup may also be given. The food should be administered at stated intervals, not, as a rule, offener than once in one and a half or two hours, and it will fre­quently be necessary to rouse the patient from his stupor for this purpose. Sometimes it is impossible to administer food by the mouth, in which case recourse must be had to nutrient enemata. Alcoholic stimulants are not often required, except in the case of elderly and weakly persons who have become greatly exhausted by the attack and are threatening to collapse. The best indication for their use is that furnished by the condition of the circulation : when the pulse shows unsteadiness and undue rapidity, and the first sound of the heart is but indistinctly heard by the stethoscope, the prompt administration of stimulants (of which the best form is pure spirit) will often succeed in averting danger. Should their use appear to increase the restlessness or delirium they should be discontinued and the diffusible (ammoniacal or ethereal) forms tried instead.

Many other symptoms demand special treatment. The headache, which persists for days at the commencement and is with many a very distressing symptom, may be mitigated by removing the hair and applying cold to the head. The sleeplessness, with or without delirium, may be combated by quietness, by a moderately darkened room (although a distinction between day and night should be made as regards the amount of admitted light), and by soothing and gentle dealing on the part of the nurse. Opiate and sedative medicines in any form, although recommended by many high authorities, must be given with great caution, as their use is often attended with danger in this fever, where coma is apt to supervene. When resorted to, probably the safest form is a combination of the bromide of potassium or ammonium with a guarded amount of chloral. The writer has seen alarming effects follow the administra­tion of opium. Occasionally the deep stupor calls for remedies to rouse the patient, and these may be employed in the form of mustard or cantharides to the surface (calves of legs, nape of neck, over region of heart, &c. ), of the cold affusion, or of enemata containing turpentine. The height of the temperature may be a serious symptom, and antipyretic remedies appear to have but a slight influ­ence over it as compared to that which they possess in typhoid fever, acute rheumatism, &c. The cold bath treatment, which has been recommended, cannot be carried out without serious risk to life in the necessary movement of the patient. It is a well-recognized rule that persons suffering from typhus fever ought not to be moved up in bed for any purpose after the first few days. Cold sponging of the hands and feet and exposed parts, or cold to the head, may often considerably lower the temperature. Throughout the whole progress of a case the condition of the bladder requires special attention, owing to the patient’s drowsiness, and the regular use of the catheter becomes, as a rule, necessary with the advance of the symptoms.

The complications and results of this fever fall to be dealt with according to the methods of treatment applicable to their character and extent.