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FEVER NURSING

Mary Harris

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No. 1.

POINTS FOR PROBATIONERS.

FEVER NURSING:

A COURSE OF LECTURES ON THE NURSING REQUIRED IN CASES OF ORDINARY FEVER.

BY

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PREFACE.

THE following articles originally appeared in the *Nursing Record* in 1888 in a serial form. They treat of a very important branch of medical nursing, about which very little has hitherto been written. They were therefore somewhat widely read, and since the numbers of the journal in which they appeared have been out of print frequent inquiries have been made for them and a widespread wish expressed that the lectures might be reprinted in book form. To meet an apparent want, therefore, and without claiming any originality

for its text, this little volume is issued. If it proves of service to Nurses, in assisting them to perform their duties more efficiently in cases often of a very critical nature, the aim of the authoress and of the *Nursing Record* will have been fully accomplished.

MARY HARRIS.

CONTENTS.

CHAPTER I.

AS the Nursing of infectious fevers does not always form part of the training of Probationers, a few hints on the management of such cases may be useful to those who are intending to become private Nurses, but who have had no opportunity of gaining practical experience in the wards of a fever hospital. It is certain that no form of illness requires more experienced and intelligent Nursing than do enteric and other fevers, and it is hoped that some practical information may be

helpful therefore to all who have to attend upon such cases.

Scarlet Fever.

In order to nurse scarlet fever patients properly it is necessary to be acquainted, not only with the symptoms of the ordinary uncomplicated disease, but also, and more especially, with those symptoms which indicate a departure from the normal, and which are the earliest signs of the different complications to which scarlet fever patients are subject. These complications are generally more serious than the fever itself, and can often be prevented, or cut short, by appropriate treatment.

There are three principal classes of scarlet fever. The *simple*, with a bright red rash and sore throat; the *malignant*, with dusky or suppressed rash, intense prostration and sore throat or

not; and the *anginosa*, the throat symptoms of which constitute the chief danger of the patient.

The malignant cases generally die from prostration in a few days; the other two classes may go on to recovery uninterruptedly, or a certain number of complications may set in, which may cause the death of the patient within a few days or weeks, or even after a number of years. The most common of these complications is *nephritis*, or acute inflammation of the kidneys. This sets in, generally, if at all, in the course of the third week. Its onset gives rise to well-marked symptoms. These are headache, listlessness, and vomiting, resembling the symptoms which ushered in the original attack. The urine on examination may contain blood. In that case, it varies in colour from a smoky hue to a deep red. It is scanty in proportion to the

intensity of the inflammation, and often altogether suppressed. Whether it contains blood or not it always contains albumen, and the quantity may be so great as almost to solidify on boiling. If the patient is up and not sent to bed on the appearance of the vomiting, &c., or if he is allowed to get up while the inflammation lasts, dropsy usually sets in. This is first noticed in a puffiness of the eyelids, but if still neglected, it soon becomes general. The face, legs, abdomen, and other parts are greatly swollen, and the pleural and pericardial sacs may become filled by a quantity of fluid. This state of things is hardly ever seen in hospital, except in those cases that have been neglected at home for some weeks, and admitted in the condition described.

Or, inflammation of the kidneys may lead to uræmia, from the deficient elimination of urea from

the blood by the kidneys. The symptoms of this condition are, again, headache, impaired vision, and perhaps twitching of the limbs. If this state is not soon relieved convulsions occur which resemble epileptic fits, and which are frequently fatal, either directly or by producing extreme exhaustion.

Another very important complication is Otorrhœa, or purulent discharge from one or both ears. This is most commonly due to *inflammation of the middle ear*, which frequently results in permanent deafness on one or both sides, and is also a frequent cause of abscess of the brain, which may occur during the illness, or years after. Both Nephritis and ear disease may, however, be permanently and completely cured.

An affection of the joints resembling, and perhaps identical with, *rheumatism*, is common.

Sometimes, however, the inflammation leads to suppuration within the joints, which is never the case in idiopathic rheumatism. The joints are red, swollen, and painful, and the affection occurs on the termination of the primary fever, that is about the end of the first week, or beginning of the second.

Pericarditis (acute inflammation of the bag in which the heart moves) and *pleurisy* (acute inflammation of the serous sacs in which the lungs are contained) are also recognised complications, and often result in what is known as the *purulent* form of the disease, by which is meant that the serous fluid which collects in the bag in ordinary cases becomes, in this event, converted into pus. Pain in the chest should therefore be looked upon with suspicion if there be a very rapid pulse.

Conjunctivitis (inflammation of the membrane covering the eye-

ball) and *meningitis* (inflammation of the membrane covering the brain) also occur in some cases; the former is indicated by redness, smarting, and running from the eyes, the latter by squint, twitchings, intense headache, &c.

It will thus be seen that there is much in scarlet fever to interest an intelligent Nurse, and she has it in her power to influence the course of any individual case.

In the first place, she must always bear in mind that she is dealing with a disease, the infection of which it is very easy to carry from the sick to the healthy. The chief source of infection is the epithelium, which peels off the whole of the skin after subsidence of the rash. This process of *desquamation*, as it is technically termed, lasts from three to six weeks, and while it lasts the patient must be regarded

as infectious. In private Nursing, it is of great importance to confine the elements of infection to the sick room. Carpets and curtains should be removed with all unnecessary furniture; a sheet kept moist with some disinfectant must be hung over the door; crockery, &c., must be kept specially for the patient's use, and nothing must leave the room that cannot be first disinfected. The patient's room should not be swept, but the floor and furniture should be wiped over every day with a cloth wrung out in a disinfectant. The discharges from the throat and nose should be removed with pieces of rag, which must be burnt as soon as used, and the patient himself must be rubbed from time to time with carbolised oil.

So much for the safety of other people. With regard to the patient, he should be kept in bed for at least three weeks from the

commencement of the attack. For the same period his diet will probably consist of milk and farinaceous food. The object of the first precaution is to keep him from chills, and, by giving him rest, to throw as little work upon the kidneys as possible. The restriction of the diet is also intended to lessen the work of the kidneys, which, in all cases of Scarlet Fever, are in a state unfit for their ordinary work. The bowels must be kept freely open, and for this purpose castor oil is usually prescribed by the doctor.

If there is much complaint of the throat, especially if the glands be swollen, relief is given by wringing a piece of spongiopiline out of boiling water, and securing it in position by a flannel bandage. To be effectual, it must be brought up well behind the ears, and not merely round the throat. If the latter

has to be painted internally, a curved brush and tongue-depressor will be needed. In no case should the Nurse attempt this if she cannot see what she is doing, or she may cause severe hæmorrhage. Some doctors prefer the use of the throat-spray. This is less objectionable to the patient, often quite as efficacious, and the same materials may be used as with the brush, except preparations containing a large proportion of glycerine; to such, water must be added until they are sufficiently thin for the spray.

In most cases the patient is fit to get up at the end of three weeks, but he should remain in the house for at least another ten days. On fine days, he may then be allowed to go out of doors, and, indeed, but for the desquamation, might be allowed to mix freely with other people. But in some cases, complications arise without apparent cause.

Thus the patient complains of pain in a joint. The Nurse should report this at once, as it is easily relieved by medicine, and is a source of danger if neglected. If it cannot be reported at once, the joints should be wrapped up in cotton-wool, and the patient kept in bed until seen by the doctor.

Similarly, headache should not be passed over without notice. It may mean little, or it may mean one of those serious complications, of which it has been mentioned already as a symptom. Again, vomiting may, or may not, be of importance, but should always be reported. Supposing nephritis (or inflammation of the kidneys) to be the cause, it may be necessary to poultice or foment the loins. If the urine suddenly become suppressed and headache and vomiting come on, it is most important to relieve the congestion of the kidneys at once,

and in the absence of the medical attendant the Nurse could do no harm by poulticing the loins, and might perhaps do good. Or a hot pack, a hot bath, or hot-air bath might be ordered by the doctor. The first of these is made by rolling the patient in a blanket wrung out of hot water, covering this in with macintosh. The patient is kept in this, or in the hot bath for twenty minutes or longer, according to the directions of the doctor. The hot-air bath is easily extemporised by putting a large cradle, or something similar, in the bed, so as to raise the bedclothes well off the patient's body, and away from the lamp. The cradle must be covered with blankets, and a spirit or oil lamp, carefully guarded, placed within. The objects of all these proceedings is to cause free perspiration, and so to make the skin relieve the kidneys by doing their work of

removing fluid and urea from the system.

Pain in the ear must also be reported. Fomentations can be applied by the Nurse, in the event of the doctor being inaccessible.

Where there is much nasal discharge, there is a great tendency to stopping up the nostrils. The best way to prevent this is by frequent syringing with a weak alkaline lotion.

The Nurse should see that specimens of the patient's urine are tested at least every third day. *She must also be careful to report any diminution in the quantity, and any smokiness or appearance of blood.*

When the patient's skin is perfectly smooth, he must be bathed in water containing some disinfectant, and must put on clothes that have been disinfected. Woollen garments and blankets must be stoved at a heat of 200° Fahrenheit.

The sick-room can be best disinfected by burning, on an iron tray, from a quarter to half a pound of sulphur. Before this is done, the fire-place and windows must be closed, the cracks in windows and elsewhere pasted up, and the drawers and cupboards must be emptied and thrown open, and the paper must be stripped from the walls and burnt. A live coal is then placed on the sulphur, the door closed and pasted up, and the room left for some hours. After it is again opened, the floor, wood-work, and ceiling must be thoroughly cleansed with disinfectants and then the walls and ceilings re-papered and whitewashed. All books and toys must be burnt, or better still, sent to amuse the patients of a Fever Hospital.

CHAPTER II.

Typhoid Fever.

TYPHOID or Enteric or Gastric Fever as it is variously termed is characterised by distinct disease in the bowels, and generally localised about the end of the small intestine. The mucous membrane of this becomes inflamed and the glands and Peyer's patches on its surface become enlarged and inflamed, and often go on to a state of ulceration. If these ulcerations

eat through the coats of the intestine, what is termed *perforation* takes place, that is to say, an opening into the cavity of the abdomen. The contents of the bowels escape into the cavity causing inflammation of the peritoneum or lining membrane of the abdomen. Peritonitis is set up, the patient as a rule becomes collapsed and quickly dies.

Now I want my readers while nursing a case of Typhoid to carry always in their mind's eye these ulcerated patches deep down in the right side of the abdomen. Then they will realise why the doctor is so anxious that the patient shall have nothing by the mouth which shall irritate these ulcers in its passage through the bowels, and why it is so essential that the patient should be kept so absolutely at rest.

Perhaps the most important part of Typhoid Nursing consists

in the feeding of the patient. As a rule, he is so indifferent, even if not quite unconscious, that, if left to himself, he will neither take, nor ask for, nourishment. And yet it is of the utmost importance that he should have it regularly, and in sufficient quantity. The amount necessarily differs for nearly every case, and of course every Nurse must ascertain, and carry out, the orders of the medical man in attendance. As a rule, about three pints of milk and one or two of beef tea, in twenty-four hours, is the quantity ordered, according to the age and digestive powers of the patient. This should be given regularly, at intervals of two hours, so as to give the stomach time to rest. If thirsty, the patient can take ice-water or soda-water between these times.

The Nurse must carefully watch for signs of undigested milk in the motions and at once report

such signs to the doctor, as it will then be necessary to give peptonised food. In cases of persistent vomiting, the patient must be fed by enemata or nutrient suppositories. When stimulants are given, the Nurse should watch the effect on the pulse of the patient, as in some cases they do harm rather than good. Of course she will not take upon herself to discontinue the stimulant, if she finds the pulse increasing in rapidity, but will simply report the fact.

Another very important part of the Nurse's duties is to carefully observe the stools of her patient, to be on the watch, not only, as I said before, *for signs of undigested milk*, but also for *hæmorrhage* from the ulcerated patches in the intestines. Especially, should she be on the watch for this when there has been a sudden and unnatural drop in the temperature of the

patient. Hæmorrhage will be serious, or not, according to the amount of blood lost, and the effect of the loss on the patient's strength. When it occurs, the Nurse should apply ice to the abdomen, especially over the *right iliac region;* if an ice-bag is not at hand, she can extemporise one with a waterproof sponge-bag or a piece of macintosh. A piece of lint or flannel should be placed between the bag and the patient's skin. Ice may be given him to suck, and he must be kept very still upon his back, and on no account allowed to make the slightest exertion. More than this the Nurse cannot do, until the arrival of the doctor, unless he has previously given her instructions. Epistaxis (or bleeding from the nose) frequently occurs in this fever, especially at the commencement of the attack, but seldom to any serious extent.

Tympanites, from the accumulation of gas in the colon, may give rise to much distress; for this, a turpentine enema or the introduction of a rectal tube will probably be ordered; if the latter, the vagina tube of a Higgenson's enema syringe may be used, and this never fails to give relief. As a rule there is diarrhœa, sometimes so excessive as to call for treatment.

Enemata of ten or fifteen minims of laudanum in two ounces of starch are most efficacious in arresting it, but this, I need not say, must not be given by the Nurse on her own responsibility. In some cases there is a tendency to constipation throughout the attack, and the patient almost invariably suffers from it during convalescence. *On no account, however, must the nurse give aperient medicines*, remembering what I have said about the ulcers in the intestines. The bowels

can be kept open with enemata. In those sad cases where perforation of the intestine takes place — a catastrophe which should always be suspected when there is sudden severe abdominal pain, aggravated on pressure, altered expression of the features, rapid falling of the temperature, and rising of the pulse, and vomiting—little can be done except to render the last hours of the sufferer as painless as may be. Full doses of opium will be ordered by the doctor, and the Nurse may apply fomentations or light linseed poultices to the abdomen; a body-cradle will also be of use, in keeping off the weight of the bedclothes. In private houses where these appliances are not at hand, pillows may be placed on either side of the patient, and will answer the same purpose.

At no time should a typhoid patient be allowed to get out of

bed, nor even to sit up, until convalescence has fairly set in; he should be encouraged to lie on his sides rather than on his back, as the latter position increases the risk of hypostatic congestion of the lungs.

The cold bath, which is so much in use in Germany in cases of hyper-pyrexia (excessively high temperature), is seldom ordered by English doctors. When it is, the bath must be placed alongside the patient's bed, and he must be lifted into it, by means of the sheet on which he is lying, a blanket being placed over him. The temperature of the bath should be at first about 90°, so as to avoid shock, cold water or ice being then gradually added, till it has fallen to 65° or thereabouts. An assistant must prepare the bed with a long macintosh and blankets, between which the patient must be placed and dried as soon as his temper-

ature has fallen to 100°, or sooner if shivering comes on.

Cold sponging is frequently ordered to reduce the temperature, but should never be done by the Nurse on her own responsibility. The patient should be placed between blankets, and sponged for twenty minutes with water, either tepid, cold, or iced, according to the directions of the doctor. The temperature should be taken before and after the sponging. In severe cases a cold pack is sometimes ordered and sometimes gives immediate relief.

I need scarcely say how very important is strict attention to cleanliness in the Nursing of this fever. The patient should be sponged at least twice a day with warm water, to which a little vinegar may be added, and his linen should be frequently changed. Perfect cleanliness, too, is one of the best preventives of bed-sores, to which typhoid

patients are especially liable, because of the extreme prostration of nerve and general vitality induced by the disease. Great care must be taken to prevent their formation; but if, in spite of all precautions, they do appear —and this, by the way, is a very unfavourable sign—the matter must be at once reported. The Nurse must be careful to keep her patient's teeth clean and free from *sordes*, and the mouth will require wiping out frequently. For this purpose pieces of rag should be used, and then burnt. Boro-glyceride is a very useful preparation for moistening the tongue. It can be applied with a feather or a small brush. During convalescence great care is required in the matter of the patient's diet, and as his appetite is usually very keen, the Nurse will need much firmness in refusing him unsuitable food. Any irritation applied to the

cicatrising ulcers in the intestine may re-excite the morbid action, and end in perforation, even after convalescence has set in. It cannot be too strongly insisted upon, that *no* solid food is allowed (except by the doctor's express orders) until diarrhœa has ceased, the tongue become clean and moist, and the temperature and pulse normal. The return to ordinary diet must be very gradual, beginning with custard puddings, &c., and progressing to white fish, chicken, and mutton. As the infection of typhoid fever lies in the excreta, some disinfectant, such as carbolic acid, should always be poured into the vessel before it is given to the patient, and after it is emptied a plentiful supply of water and more disinfectant should be used to flush and cleanse the drain. A well-known medical man tells me that he is in the habit of ordering all excreta in cases of

Enteric Fever to be buried in a deep hole dug in the ground at some distance from the patient's house, thus preventing all contamination of sewers. The disinfecting property of mould is well known. In this disease there is far less necessity for the sick-room to be cut off from the rest of the house, or for keeping the Nurse apart from the other members of the household, than in scarlet fever.

CHAPTER III.

Typhus Fever.

THIS is a disease rarely met with amongst the upper classes, and amongst the poor only in the over-crowded parts of very large towns. It is most rife in people exposed to defective ventilation, dirt, and starvation, and is so exceedingly infectious that it is almost impossible for a Nurse to be in the midst of it for any length of time without herself contracting the disease. There are, however, certain precautions to be taken which will, to some extent, lessen the risk she must, of necessity, incur.

This fever is so often con-

founded with typhoid that it is well for those Nurses who are engaged in district work to be able to distinguish between the symptoms of the two, as in typhoid there is very little risk from infection, while, as I said before, in typhus the risk is very great.

In the first place, in typhus the access of the disease is usually well marked or even sudden, and is characterised by rigors, headache, and general pains resembling acute rheumatism: while the access of typhoid is gradual and insidious, the patient complaining only of *malaise*, and frequently keeping at his work for a week or more from the commencement of the attack.

In typhus the eruption consists of a mulberry rash coming out between the fourth and seventh days, upon the hands and arms first, and extending to the body and legs, and occasionally to the face. At first the spots are not

unlike the rose-spots of typhoid fever, and disappear on pressure, but later they become petechial and dark, the general hue of the skin being dusky and mottled. In typhoid the rash appears in the second week, and is, as a rule, confined to the chest and abdomen; the spots are slightly raised, disappear on pressure, and come out in successive crops.

The face, in typhus, has a dusky appearance, the eyes are dull, the expression heavy, and prostration occurs early, and is considerable; while in typhoid the prostration is not marked, the eyes are bright, and the cheeks are often flushed.

In typhoid diarrhœa is very common, and hæmorrhage from the bowels frequently occurs; in typhus diarrhœa is rather the exception—medical books, indeed, tell us that it never occurs, but, as a matter of fact, in severe cases it is sometimes met with—

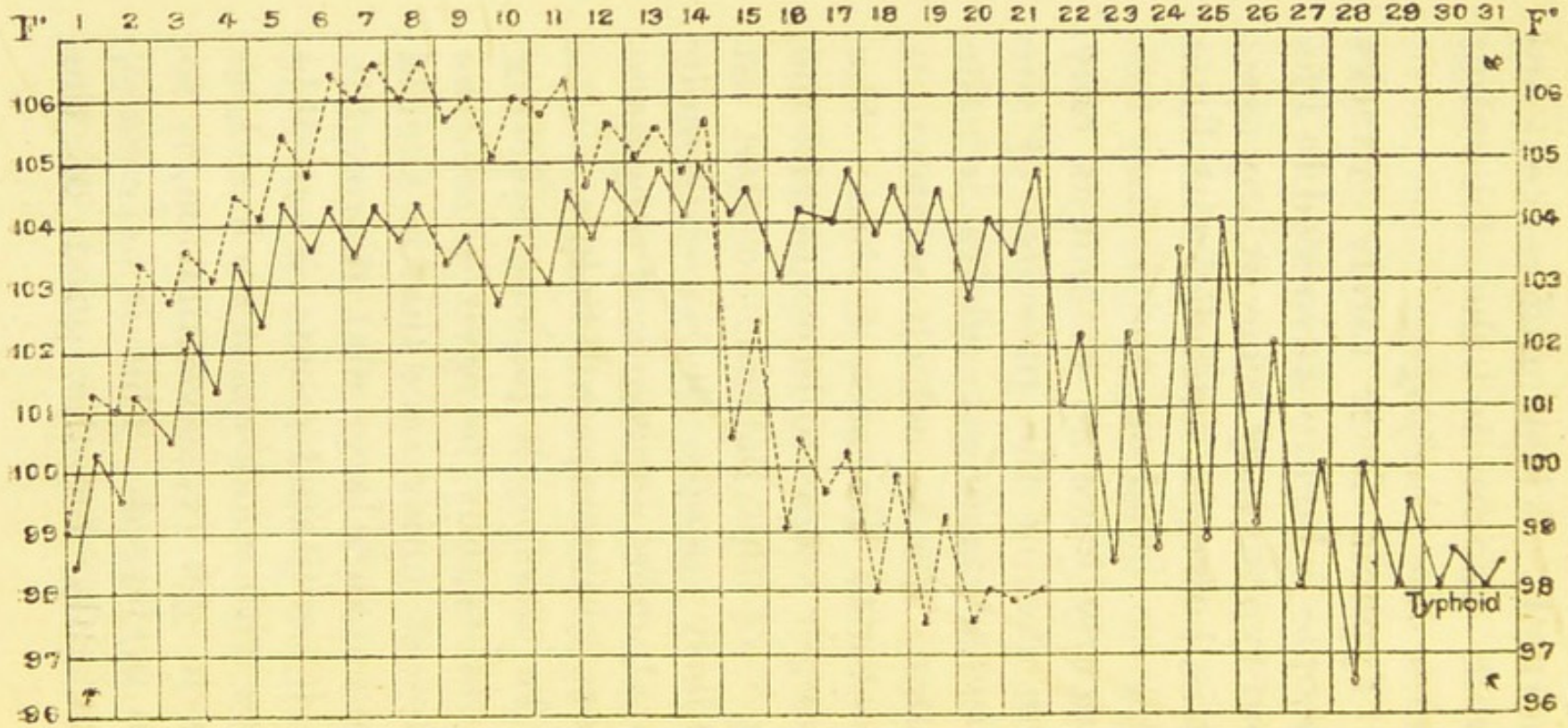
though hæmorrhage is exceedingly rare, and when it does occur, must be looked upon as a very bad sign.

In typhus the temperature rises quickly until about the third day, when it reaches 105° or more, the morning remissions being very slight; it then remains nearly stationary until the fourteenth day, when it drops somewhat suddenly, though in many cases the crisis is not reached until the seventeenth day. After this there is no danger of a relapse, though the patient is left extremely prostrate, and is often delirious for some days longer. In a typical case of typhoid, the temperature rises very gradually in the first week, remains almost stationary in the second, in the third week the morning remissions and evening exacerbations are very marked, and in the fourth the evening temperature gradually drops until it becomes

normal. These differences are well shown in the following table *(see next page)*.

Typhoid fever rarely attacks people who are advanced in life, but typhus may occur at any age; it is, however, attended with little risk to children, and as they frequently have no rash, it is only the fact of the presence of the disease amongst adults in the same house which enables a doctor to diagnose typhus. The danger seems to increase with the age of the patient, so that in elderly people it is extremely fatal, more especially if they have been of intemperate habits.

In nursing a patient suffering from typhus fever it is of the utmost importance that he should be put in a large and thoroughly well ventilated room; if possible one with windows at each end, so as to get cross-ventilation, is to be preferred. This is necessary, not only for the good of the



Ranges of temperature in typical cases. The dotted line represents a case of typhus, the dark a case of typhoid.

patient, but also for the safety of those attending upon him. The windows must always be kept open for an inch or two at the top, even in the coldest weather, as the temperature of the room can be easily maintained at 60° by means of a good fire. And it must be remembered that a fire is a most important help to ventilation, so that even in summer (excepting perhaps the very hot weather) it is desirable to have a small one burning. A careful Nurse, finding that her patient is suffering from congestion of the lungs, will perhaps feel doubtful about opening the windows in cold weather, but she must bear in mind that the want of fresh air will be likely to do him far more harm than will the risk of cold. From the latter she can protect him by screening the bed from draughts, by keeping the room at an even temperature, and by covering his chest with cotton wool.

The feeding of her patient is a very important part of the Nurse's duty. The prostration is so great in this fever that it is absolutely necessary that those who suffer from it should be made to take a sufficiency of nourishment. The doctor will, of course, give instructions as to the amount of stimulant to be administered, and the Nurse must see that this, and food, consisting of milk, eggs, and good beef-tea, are taken regularly, and in stated quantities. This will sometimes require a great deal of tact and patience on her part, but she must on no account yield to the patient because she finds him unwilling to be disturbed.

During the first week she will be able to do much to relieve the distressing headache from which the patient invariably suffers. The hair should be cut close to the head, and cloths wrung out in evaporating lotion, or an ice-cap,

may be applied, and will afford much relief; but the former will require frequent changing, and, with regard to the latter, it must be borne in mind that when the last piece of ice is melted the ice-cap quickly becomes converted into a warm-water bag, and does more harm than good. Epistaxis frequently occurs in the early stages of typhus, and may be beneficial in relieving the head symptoms; if excessive, it can usually be checked by applying lint dipped in iced water to the forehead.

The Nurse must be very careful to notice, and report, the sleeplessness from which typhus patients so frequently suffer. Opiates or hypodermic injections will probably be ordered in this event, and she must be able to give an accurate account of the effect produced by them. She must also remember that retention of urine is of common

occurrence, and must at once be reported. In the absence of the doctor, she may apply hot fomentations, but if they prove ineffectual, and her patient be a female, she cannot do wrong in using the catheter. Constipation must also be reported, as, though aperient medicines may be given in this fever, the nurse should never administer them on her own responsibility.

Congestion of the lungs can hardly be said to be a complication of typhus fever, inasmuch as it is so general as almost to form part of the complaint. Turpentine stupes are frequently ordered to be applied to the chest. They should be left on until the skin is red, about fifteen minutes being usually long enough, and when removed the chest should be quickly wiped dry with a warm towel, and cotton-wool applied, to prevent any chance of a chill.

Paralysis of the throat occurs

occasionally in very severe cases, and will necessitate the use of the æsophagus tube for administering nourishment, as the patient will be unable to swallow.

Hiccough, and *subsultus*, or twitching of the hands, are also very bad symptoms occurring in severe cases.

The patient's mouth and tongue will require as much attention in typhus as in typhoid fever, and his whole body must be sponged with warm water twice a day. When very restless, sponging has a most soothing effect, and will often induce sleep, thus doing away with the necessity for an opiate. The Nurse will need to be specially careful in guarding against bed-sores. Strict attention to cleanliness and dusting the skin with oxide of zinc powder will generally be sufficient to prevent their appearance, and as all Nurses know, in this matter, as in most others,

"prevention is better than cure."

During convalescence, abscesses are very likely to form on different parts of the body, and must be poulticed, until they are ready for incision.

There is less necessity for caution in the diet of a convalescent typhus patient, than in that of one who is recovering from typhoid. When his tongue is clean and he is able to take solid food, he may be allowed anything he fancies, in reason, and with the aid of food and tonics, he will quickly recover his strength.

For the Nurse's personal safety, she must remember, first, to keep her patient's room well ventilated, by night as well as by day. Secondly, to avoid stooping over the bed as much as possible, since the danger of infection lies entirely in the breath, and emanations from the body of the

patient. Thirdly, to take daily exercise in the open air. This is most important, and cannot be too strongly insisted upon. And lastly, as anything which depresses body or mind — as anxiety, want of food, or fatigue —must be regarded as a pre-disposing cause, she must never enter the sick room in the morning, without having previously taken a good meal.

For the safety of others, she must see that the personal and bed-linen of the patient are freely exposed to the air for some hours, before being sent to the laundry, as the poison seems to be rapidly destroyed by diffusion through the atmosphere, and, though typhus is not generally considered communicable, it will be advisable to observe the same precautions during the illness, and disinfection in the sick-room afterwards, as are necessary in scarlet fever and small-pox.

CHAPTER IV.

CHICKEN-POX.

VARICELLA, commonly called chicken-pox, is a complaint requiring little special treatment, and is attended with little or no danger to the person attacked by it. It attacks children mainly, yet adults are by no means exempt. Varicella has been often confounded with small-pox, of which it has been regarded as a modified variety; of the perfect distinction of the two, however, there can be no doubt,

since the one disease never imparts the other, and they occur in independent epidemics; moreover, the one disease is not protective against the other.

The invasion of chicken-pox is marked by febrile symptoms, which are sometimes severe, but present no distinctive character, and which generally, in a few hours, are followed by the appearance of the rash. This consists in the first instance of a number of rose-coloured spots appearing first on the chest, and then on the face, trunk, and limbs. In the course of a day or two, these spots become distinct vesicles containing a transparent fluid, and in this stage they greatly resemble small-pox vesicles. They never, however, become pustular, but after a day or two break or dry up, and small dark-coloured scabs result. The formation of these scabs is complete at the end of a week from

the first sign of illness, and they remain adherent for two or three days. After separating they leave red stains which are slow to disappear, and sometimes permanent cicatrices. The eruption is not limited to the first crop, but during the first three or four days of the disease, fresh crops spring up and go through the same stages as those which were first developed. During the progress of the disease vesicles usually appear in small numbers on the palate, sides of the tongue, and mucous surface of the lips and cheeks. The general symptoms of chicken-pox are, for the most part, slight and unimportant. There is commonly some feverishness, languor, and loss of appetite, and the temperature may rise to 101°, or a little more, in the evening. The tongue will probably remain clean throughout. The complications and sequelæ are not important,

nevertheless children often remain weak and out of health, for some time after an attack. The patient must be separated from those who are liable to take the disease, as it is extremely contagious; he should be confined to one room, if not to bed, and must be prevented scratching the pimples upon the face, so as to diminish the liability to "pitting."

The Nursing consists in the general principles of ventilation of the room, and disinfection of the linen, avoidance of all chances of chilling the skin of the patient, and perfect cleanliness, the application of oil or vinegar and water to relieve irritation, and careful adherence to the rules for diet and stimulants laid down by the doctor.

MEASLES.

There is no disease more general amongst children than measles, although it is by no

means confined to them, but may attack adults at any period of life. It is, however, mainly a disease of childhood, not because adults are naturally indisposed to take it, but because from its constant presence amongst us and its extreme contagiousness, almost all persons have it early in life, and are thus protected from subsequent attacks. In some cases the same individual takes it a second or third time.

The contagion of measles does not seem to be conveyed by the air, but it clings to surfaces and may be readily conveyed by the clothing from place to place. After infection, the disease passes through a period of incubation, which lasts from ten to twelve days, or even a day or two longer, before the characteristic rash appears. The appearance of this, however, is preceded by certain well-defined symptoms, of which the more important are lassitude,

chilliness, and the signs of a common cold. These are sneezing, running of the nose and eyes, head-ache, drowsiness, and cough. These symptoms usually last three days; on the third or fourth day a few spots of the eruption become visible on the forehead, from which they gradually spread over the cheeks, and from the face to the rest of the body. Hands and feet are both affected, the rash consisting of rose-coloured spots which, slightly raised, are clustered together in crescentic patches. When they have obtained their full-size, however, neighbouring spots run together, and sometimes where the rash is very thick an area of uniform redness results. The spots individually appear and fade in about twenty-four hours, and the eruption as a whole continues about four days, at the end of which it should have disappeared. As the eruption

subsides the other symptoms subside also, the feverishness disappears, and, in a favourable case, the patient at the end of a week from the commencement of the symptoms of cold, is left somewhat weak but in a state of convalescence. In a very severe case of measles the patient is prostrate from the beginning, the pulse is rapid and feeble, the eruption is scanty and of a dusky hue, the lungs get congested, typhoid symptoms, characterised by black tongue, tremulousness and delirium, soon come on, and the patient dies collapsed, perhaps comatose, at an early period. These cases are, however, very rare, the chief danger attached to measles being the bronchitis which often accompanies it or the general weakness which generally follows it. Sometimes the bowels are affected, and death may ensue from the weakness caused by obstinate diarrhœa.

It will thus be seen that care and attention are always necessary, notwithstanding the apparently trivial nature of the complaint. The patient should be isolated and confined to a well-ventilated room, and when the signs of fever appear it will be best for him to remain in bed. The Nurse must carefully protect him from draughts and chills. The light should be partially excluded when the eyes are weak; barley water, lemonade, and toast and water may be given for thirst; the diet should be mainly bread and milk, beef tea, and such food as is nourishing and easily digested.

If the rash suddenly disappears and delirium sets in, the Nurse will probably be directed to put the child in a warm bath containing mustard; he must be left until the skin becomes slightly red and should then be taken out, rolled in a blanket (without

drying), and placed in bed. In cases of laryngitis (or inflammation of the larynx) the inhalation of steam gives relief; flannel wrung out of hot water and covered with macintosh may also be applied to the throat.

Bronchitis is usually combated by linseed poultices and the steam inhaler. It is useless to separate a child from his brothers and sisters when he has been sleeping with them until the appearance of the rash, as measles is certainly infectious during the period of invasion. There is often considerable desquamation after this fever, and this causes it to be mistaken occasionally for scarlet fever by inexperienced persons; it may, however, be distinguished from that disease by the fact that it commences with the symptoms of a common cold, but scarlet fever does not. In measles the rash generally appears on the

fourth day of the fever, in scarlatina on the second; the rash in measles is of a crescentic shape, the spots, which resemble flea-bites, being slightly raised above the skin; in scarlet fever, the eruption is not raised, it is diffused, and of a bright red colour, commonly compared to "boiled lobster." In measles the chest is chiefly affected; in scarlet fever, the throat. It will thus be seen that the two diseases have distinctive symptoms throughout, and are not likely to be mistaken for each other by persons of any experience.

CHAPTER V.

Small-Pox or Variola.

THIS is a disease of which many Nurses have a great dread. There is, however, far less risk for those who are nursing it than in other fevers, inasmuch as vaccination ensures an almost certain immunity from an attack. Statistics show that the unvaccinated die at the rate of 50 per cent., the imperfectly vaccinated at the rate of 26 per cent., and the well-vaccinated at the rate of about 2 per cent. It will thus be seen that if a Nurse takes the pre-

caution of being vaccinated before going amongst small-pox patients, she runs very little risk; indeed, experience proves that she may be in the midst of it for months, and even years, with perfect safety.

The most important forms of small-pox are those which are known respectively by the names of "discrete," "confluent," "hæmorrhagic," and "malignant." In discrete small-pox the pustules are comparatively few, and are widely separated from each other. The invasive phenomena of shivering, headache, vomiting, and lumbar pain (or pain in the back) are generally well-pronounced; but the febrile symptoms disappear on the first appearance of the rash, until the commencement of suppuration, and then the secondary fever is slight, and the patient, for the most part, recovers without any complication.

In confluent small-pox the pustules touch each other, and run together, and the symptoms at all stages are more severe. There is very little, if any, temporary remission of the fever. The swelling of the face is very great, and the patient is often unable to open his eyes. The pocks are not limited to the skin, but are also developed on the mucous surface of the nose, mouth, fauces and pharynx, and even on that of the larynx and trachea (or wind pipe), and sometimes upon the conjunctivæ, adding greatly to the distress of the patient, and increasing the danger of the disease—sometimes even producing suffocation. Death from confluent small-pox usually occurs between the tenth and the fifteenth days of the disease, and is due to a combination of coma and exhaustion, the signs of a fatal termination being low delirium, twitching of the muscles

and limbs, and occasionally hæmorrhage into the skin. In favourable cases the eleventh day generally marks the turn of the disease, and by the fourteenth day convalescence will have begun.

Malignant small-pox is characterised by the early appearance of petechiæ, effusion of blood into the pocks and conjunctivæ, and rapid collapse. The symptoms of invasion are usually intense, and the patient often dies on the fourth or fifth day, or before the eruption has had time to become distinct.

When a case of small-pox is to be nursed in a private house it is necessary that the whole of the top floor should, if possible, be devoted to the patient and his attendants. The sick room must be well ventilated, windows kept partly open, a fire burning, and the floor must be sprinkled with disinfectant fluid, while some deodorant, such as Sanitas pow-

der, may also be sprinkled about the bed-clothes and room. The door should be kept closed, and a sheet, wet with a solution of carbolic acid, hung outside it so as to cover every crevice. All curtains, carpets, and unnecessary furniture must be removed from the room before the patient enters it, and all his bed and body-linen should before leaving the room be put into a solution of carbolic acid; after remaining in this for at least an hour they should be boiled. All cups, glasses, spoons, and such articles used in the sick room must be placed in some disinfectant solution before leaving it, and subsequently washed in hot water. The patient's person and bed should be kept scrupulously clean; and when during the progress of the disease scabs form upon the skin, their diffusion should be prevented by smearing the surface daily with oil. The

entire house should be kept well ventilated and very clean; all sinks, &c., should be in good order, and have a solution of carbolic acid or chloride of lime poured into them daily. The Nurses should wear dresses of washing material, and should under no circumstances mix with other members of the household. At the termination of the illness the room must be disinfected in the manner described in connection with scarlet fever.

The patient's nourishment should consist of milk, beef-tea, chicken-broth, and eggs, and he may be allowed to drink freely of iced water, lemonade, or soda-water. In all forms of fever there is no drink more grateful to the patient than barley water made in the following manner:—Take as much pearl barley as can be grasped in the hand, wash it five times in boiling water, and the last time leave it in the water, of

which there should be one pint. A very small quantity of loaf sugar, half the peel and the juice of a lemon should be added, and the jug (covered) placed in a cool place till perfectly cold, when the water must be strained into a clean jug for use. Black-currant jelly may be of use in relieving the soreness of the throat. The Nurse must remember that patients suffering from confluent small-pox cannot be washed until the pocks are dried up, but she must bestow special care on the eyes. They should be sponged, dried, and anointed with olive oil, and if there be any tendency to inflammation or ulceration of the conjunctivæ, the solution which the doctor prescribes must be carefully and frequently dropped in between the lids.

During the earlier stages the patient's face should be painted with iodine, or with starch, to form a thin mask, and in the later

stages the face, and, indeed, the whole body, should be smeared with oil or vaseline. During the period of decline of the eruption, and that of convalescence, the strength of the patient needs to be supported in every way—by good and nourishing diet, by stimulants, and by quinine or other tonics. Of the complications of small-pox, *laryngitis*, *bronchitis*, and pneumonia—inflammation of the lungs—are the most common. Glandular swellings and abscesses often occur, and must be nursed according to ordinary principles; the nurse must bear in mind, however, that their presence tends to still more enfeeble the patient, and is, therefore, an indication for sustaining strength by carefully and frequently administered nourishment.

When the patient is convalescent he must not be allowed to mix with the rest of the family

until all the peeling of the scabs has ceased, and the skin become perfectly smooth. This is often a long and wearisome process, but it may be hastened by daily warm baths, to which should be added some disinfecting solution.

I should like, in conclusion, to say a few words on the subject of Fever Hospitals and Fever Nurses. Is it not a fact that until quite recently the idea prevailed that just as any sort of building was good enough for a Fever Hospital, so any sort of woman was good enough for a Fever Nurse? No matter how rough, ignorant, or incapable she might be, she was considered quite fit to attend upon that form of illness which, more than any other, seems to require gentle, refined, and experienced nursing. Those days are, happily, now of the past, and it is fully recognised that nowhere is the "efficient nurse" more necessary than in the wards of a

Fever Hospital. The patients, as a rule, are so helpless, that it must be especially galling to be dependent on a rough, unsympathetic woman who, probably, shows only too plainly that she considers them very troublesome if they make any extra demands on her time and sympathy. Then, again, they are so often quite unconscious that if, like her renowned predecessor, Mrs. Gamp, she chose to remove the "piller" from the patient's head to her own, or, perhaps, to transfer the stimulant intended for him to her own tea-pot, she could do so without anyone being the wiser.

Bright, clean, cheerful wards, and intelligent, well-trained, and trustworthy Nurses are needed in all hospitals, but surely nowhere more than in those which are set apart for the nursing of Infectious Fevers.

EXAMINATION QUESTIONS.

1. What are the varieties of Scarlet Fever, and what complications may be met with in the course of an ordinary case?

2. A patient recovering from Scarlet Fever has a sudden suppression of urine. What has happened, how was it caused, and what would you do?

3. What occurs in the intestines in a case of Typhoid Fever? How does a knowledge of this influence the treatment?

4. What would you watch for and report in a case of Typhoid?

5. How would you give a cold bath to a patient suffering from Typhoid Fever?

6. What one word sums up the most important point for a patient with Typhoid, and what other word sums up the most important point for the other people in the house?

7. What are the differences between Typhus and Typhoid?

8. What are the chief points to be observed in the Nursing of a Typhus case, and how would you nurse it?

9. Describe a case of Chicken-Pox. How would you know it was not a case of Small-Pox?

10. What are the distinctions between Measles and Scarlet Fever? How would you Nurse, and what would you watch for in a case of Measles?

11. What is Small-Pox, and what are its varieties and complications?

12. How would you nurse a case of Small-Pox, especially with regard to preventing pitting of the skin?

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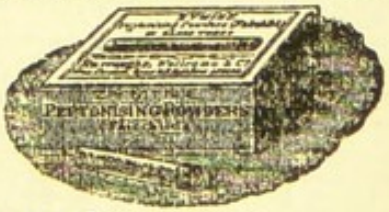

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