

HARMLESS POSTOPERATIVE TEMPERATURE.

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The danger of chronic suppuration of the middle ear is evident to all. We often have typical lesions, while at other times they are altogether out of proportion to the symptoms. A brain abscess may be latent for an indefinite time without any symptoms whatever, but usually there is some indication of hidden trouble. Occasionally multiple abscesses occur when but one is suspected. Pachymeningitis is frequently found, without manifesting any symptoms, and even epidural abscess is occasionally discovered during operation. These cases may be exceptional, but they occur with sufficient frequency to justify careful consideration of the subject.

In pachymeningitis with pus we expect pressure pain with perhaps intermittent discharge; the pains may be severe, mild or absent altogether. In leptomeningitis we have irregular temperature, stiffness of the neck muscles, Babinsky, tache cerebral, Kernig's sign and other nervous signs, which may be augmented by examination of the spinal fluid. Brain abscess usually gives us a slow pulse, dull pain, low temperature, slow mentality, sleepiness or somnolence. If the abscess is located in the cerebellum, in addition there is usually nystagmus towards the side of the disease; dizziness and occasional vomiting also occur. In phlebitis, especially of the lateral sinus, which is most affected in ear cases, there is commonly the steeple-peaked temperature of slow or rapid repetitions, according to the virulence of the infection. In septic thrombosis the symptoms include violent chills and sweats, depression from sepsis and a high leucocytosis. In suppuration of the internal ear, dizziness, nystagmus, often vomiting and deafness, following caries of the middle ear.

The case becomes more complicated when several of these lesions occur together, and of course disaster is more apt to follow. Yet nature is very kind to some patients. I have seen a man walk from his bed to the operating room where a radical mastoid was done, manifesting no special symptoms but enough pain to cause him to consult his physician. On his death the second day after, we found one entire hemisphere covered with pus which trickled on the floor as the upper calvarium was removed. He was an old syphilitic. In another case a lady walked into the office with pus discharging into the external auditory canal from a brain abscess. A third was sitting in a chair, temperature 104° , some pain deep in the ear, but refused at first to go to a hospital, not feeling particularly sick. At the operation on the same day we found a circumscribed epidural abscess, a thrombus in lateral sinus which had broken down and formed pus in the sinus.

These are unusual cases, but they may occur at any time; and they should always be suspected and never passed over lightly when caries of the tympanum is present. Unless one sees a number of such cases with brain complications, he is apt to overlook some common symptom and the patient may succumb; on the other hand, some real prominent symptom may mean very little, but may impress the physician greatly and cause unnecessary worry. The surgeon is often called to operate out of town, not knowing much of the patient's history and acting only on present indications, then not seeing the patient again. Bad results occasionally follow the operation because too little was done; still the patient may have passed away if the exact condition had been ascertained. However, a doctor's conscience is more at ease when he is fairly sure of the status of the patient. If these patients can be observed a few days before and after the operation, one may be able to render better satisfaction. Often operations become necessary when the physician makes his first visit; it is unfortunate, but sometimes circumstances may require immediate action.

One important item must not be overlooked. It is not at all uncommon for patients to deny any former ear trouble. Brain affection due to the ear is at once dismissed, and an opportunity is thus lost to save life. A number of such cases upon examination were found with scars on the drumhead, or

old perforations, leaving a good field for developing bacteria. In all suspicious cases the ears ought to be examined before they are dismissed as a factor in meningeal or brain infection.

I would like to call your attention to a procedure of importance which any man may carry out and which will always give him fairly accurate information, and that is the examination of the blood. If there is a moderately high leucocytosis with a normal polynuclear percentage, followed in ten or twelve hours by a mild recession the next day and the following day the same, you may be quite sure the patient has no complication and will speedily recover; if this condition is reversed, there are breakers ahead; and this shows twenty-four to thirty-six hours before any other symptoms are noticed. If, for instance, the patient runs a receding temperature of 106° or more, and the leucocytosis is normal, there is nothing to fear from infection. On the other hand, if the temperature is normal or below and leucocytosis is high—say 20,000 or 25,000—there is something brewing, and rapidly, too.

There are four conditions where the temperature could be below normal in serious cases: brain abscess, sinus thrombosis, shock, and approaching dissolution. If the temperature is taken every hour and a blood count made twice a day where any complications are suspected, one can act far more intelligently than where these things are omitted. Especially is this true with septic sinus phlebitis. You may find the temperature 106° or below normal at your daily visit, whereas, if the temperature had been taken frequently, it would have been found that both extremes occurred on the same day; at any rate, the blood count would have disclosed the approaching danger. Suppose that several weeks after an operation or after an acute attack of some kind, perhaps an apparent simple sore throat, a patient gets a sudden high temperature preceded by a chill, sometimes of considerable severity, lasting for several minutes, and these chills agitate the patient so violently that the bed trembles, the temperature rising thereafter and at times receding in a few hours, at other times remaining stationary a few hours, then declining slowly, and that process may be repeated at intervals of a few days to a week or more; pain may be present in some distant part of the body, and apparently no connection with the lesion in the throat or ear, yet there is undoubtedly infection localized

somewhere, remote from the original disease. This is peculiarly the case with embolic infection. The immediate effect is a rise in temperature for a short time only. The leucocytosis may be disturbed and run to a height of 20,000, polynuclear percentage nearly up to the limit. In one case it was found to be ninety-eight per cent, more often it is not over ninety per cent. Such patients may have considerable pain, or the temperature rises, but, however, gradually subsides until another spot becomes infected. These areas of infection take place anywhere—liver, spleen, brain, lungs, joints, etc.

Endocarditis is a common cause for such abnormal temperature, and this condition is not always easily made out. I believe it is oftener found after operations. However, the rule is that these patients usually recover. When this condition occurs early after an operation, or some septic disease, and the patient does not improve rapidly, the streptococcus or diplococcus capsulatus is the probable cause and the patient succumbs. The blood count will usually indicate the severity of the infection. These patients can often be saved if the diagnosis is made early. They usually recover when a distant vein is affected. The same condition exists in endocarditis. Unless the infection is carried to some other part of the body, no special difference is noticed in the temperature; but should an embolus affect any other organ, the temperature shoots up three or four to six and eight degrees. But if the patient ultimately recovers, the temperature recedes rapidly and the constitutional effect is not marked at all.

The temperature in each one of my cases was postoperative, but it occurs in any kind of infection except where there is much shock. We notice the high and low temperature in septic sinus thrombosis, but we do not know about the thrombus until this peculiar temperature occurs, so a patient is liable to succumb before a diagnosis can be made. Marasmic thrombus usually causes no such temperature, nor does a thrombus anywhere in the body where it is thoroughly organized.

A similar condition of affairs exists in infection following tonsillitis, arthritis (commonly called rheumatism), pneumonia, periostitis and bone necrosis or abscess, remote from the throat lesion. But the infection, seldom traced to the throat, since it comes on several weeks after the throat has apparently recovered, is, nevertheless, due to the lymphatic absorption

and final distribution to remote distances. This explains many affections hitherto treated as idiopathic diseases. Furthermore, where lymphatics are abundantly distributed, the presence of infection, even though mild, is rapidly manifested. This is true in sinus disease, which may cause rapid rise in temperature and a lymphangitis of the brain with very severe pain. But a more palpable illustration is found in septic deposits, as in the heart or sinuses, or even after abdominal operations. The sinuses of the brain give splendid opportunity for demonstration.

When a septic thrombus forms, there are no other symptoms than those commonly found in any other infection; but where a particle is carried into the circulation, there will be a sudden rise in temperature commensurate with the degree of infection; and every time such embolus has made its call in a remote part of the body, we get a repetition of the high temperature. As these points of hesitation are small, the temperature remains high but a short time and commonly recedes in a few hours to recur again and again. It is one way nature has of letting us know the condition of the patient, and many lives have been saved because of recognition of this symptom.

The peculiar temperature shown in the charts are all due to chemical or organic emboli, and all recovered as predicted, for the prognosis is always good when the constitutional symptoms are mild, regardless of the high temperature.

The chart No. V is so arranged by Kopetzky that when the polynuclear percentage is less than the total leucocytes, the line runs downward. This indicates good resistance and good prognosis. If the opposite occurs, look out for trouble. The blood counts should be made every ten hours, or at least twice a day.

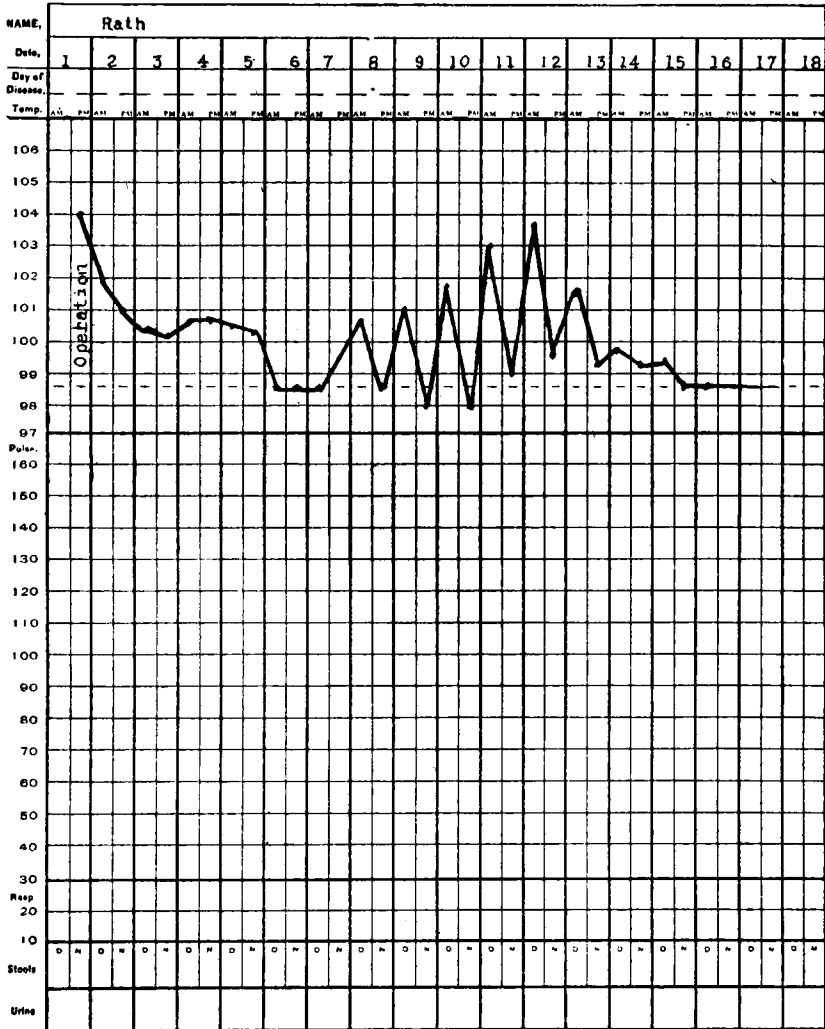


Chart I, Case 1. Radical Mastoid Operation.

Sinus thrombosis, which had broken down and formed pus in center; epidural abscess. After operation temperature fell to normal; after the seventh day temperature rose and continued to rise and fall for a week, then gradually recovered. At the height of the fever, which reached 104.5°, the consulting surgeon said the patient would die, with which I disagreed. Recovered.

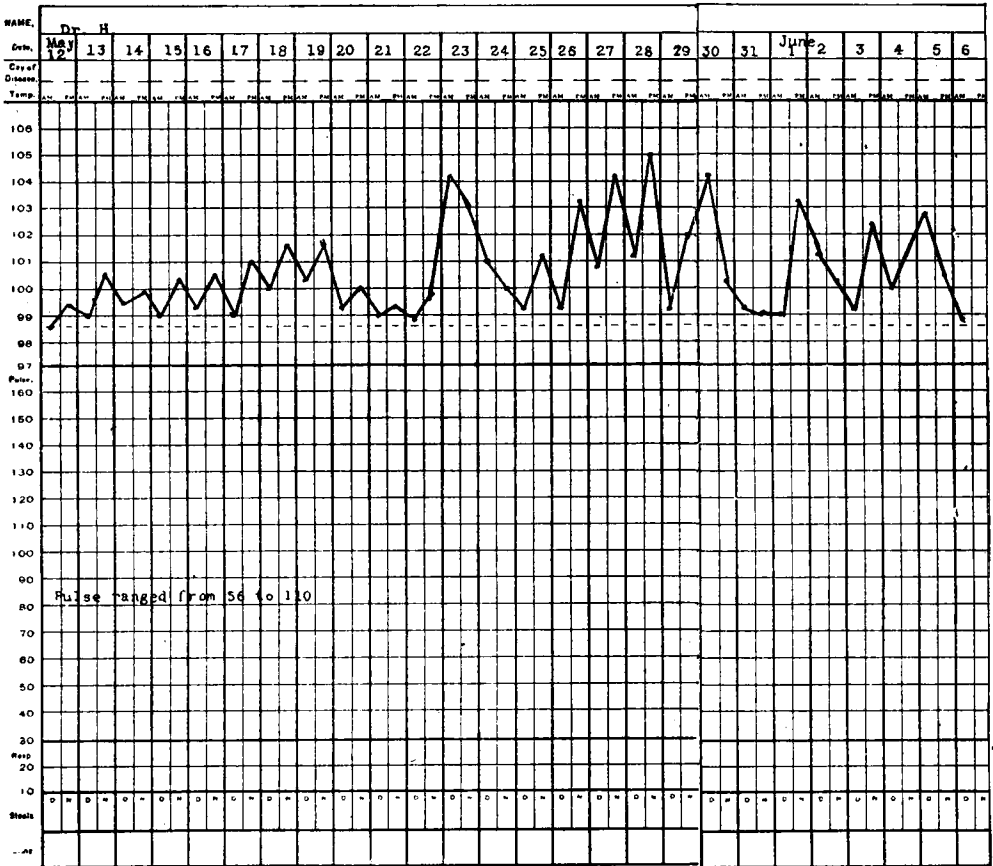


Chart II, Case 2. Radical Mastoid Operation.

Caries. Fifth day after operation, temperature rose and continued to rise and fall for a week. At the end of that time, in consultation with two eminent men, an internist and a surgeon, it was decided to explore the lateral sinus. But the next day the temperature returned to normal and I put off operation. Final recovery.

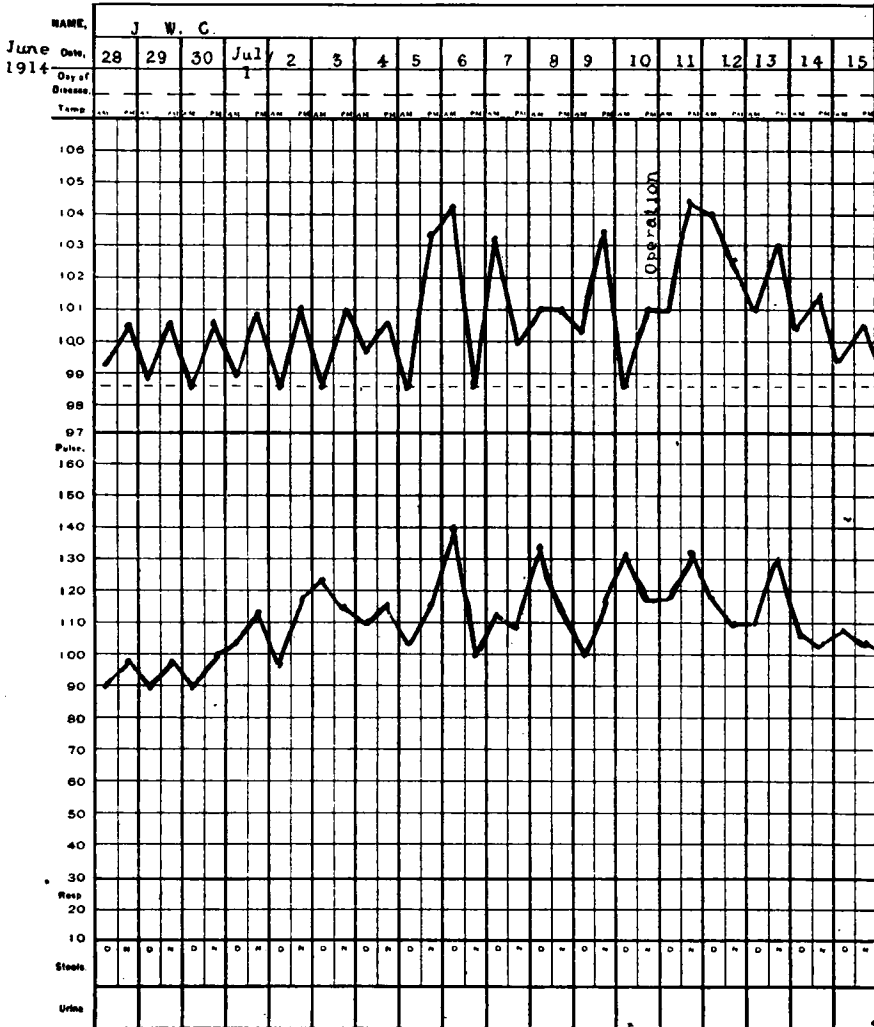


Chart IV, Case 4. Radical Mastoid Operation.

Patient thought to have typhoid fever; after two weeks drum ruptured and discharged pus for about ten days, when I saw him. His trouble was supposed to be acute mastoiditis. Found sclerosis due to recurrent attacks; mother denied previous ear disease, but acknowledged boy had complained of earache off and on. Red cells, 4,250,000; white cells, 10,000. Lingered for several weeks after he left hospital, then recovered.

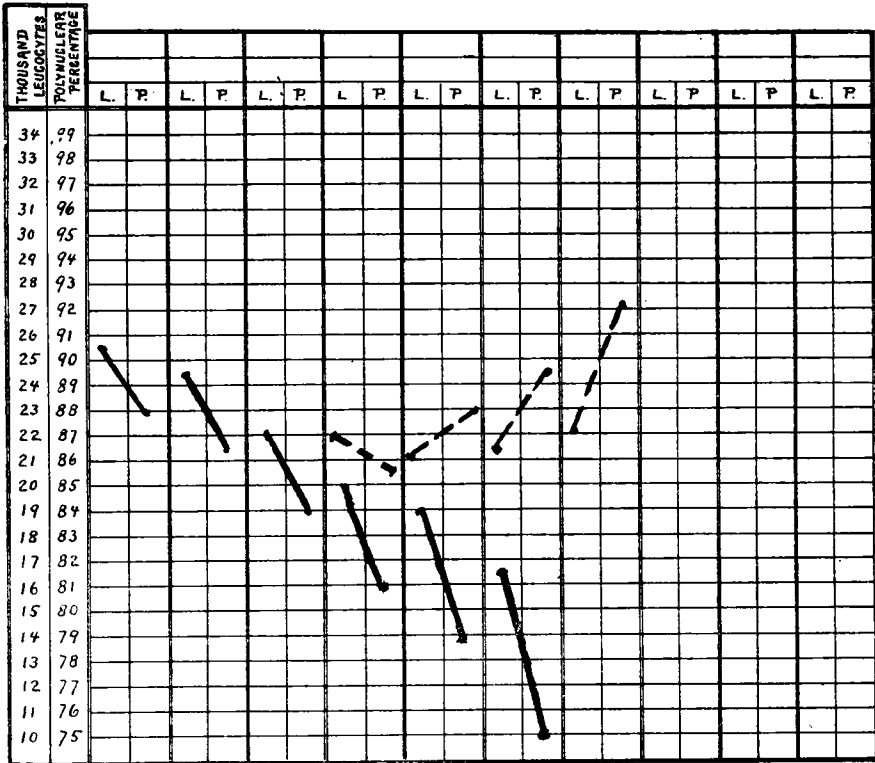


Chart V.

Arranged by Dr. Samuel J. Kopetzky.