

the subsequent patency of the opening; these are changed on the second day, and, if the general and local conditions are satisfactory, the case is left in charge of the sister, who continues four-hourly irrigation and fomentations until the whole wound is free from pus and covered with healthy granulations.

I now wish to invite attention to some details in this method of treatment:

1. As a useful guide to a good counter incision I have found a closed large straight blunt scissors very handy; it can be safely pushed through the tissues, and when approaching the posterior subcutaneous area, expanded to the full (3 to 4 in.), thus indicating two definite distant points for one sweep of the knife. With the same scissors closed, as a blunt separator, the intervening tissues are promptly opened up to a diameter corresponding to the superficial incision.

2. As to the method of irrigation suitable to cases in which there is always danger of contamination, particularly when a number have to be treated simultaneously in hospital, I strongly advocate the use of a one or two litre enamel jug, as more efficient lavage can be obtained by pouring the lotion in a steady flow from it.

3. It is most essential to apply a tourniquet in these cases, as otherwise the part becomes obscured with blood and secretion. When the tourniquet is removed, all spurting vessels are seized with forceps and ligated with fine catgut; any oozing which may continue is checked by the subsequent irrigation with hot "peroxide carbolic." If the latter should not be successful, I pack the bleeding area firmly with large bibules soaked out in hot peroxide; these are removed in six to twenty-four hours by irrigation and gentle traction.

4. The limb is always fixed on a splint by separate bandages above and below the lesion, so that subsequent irrigation can be carried out without removal of splint; soiling of the latter is prevented by the insertion of a piece of rubber tissue between it and the affected portion of limb.

5. When possible, all serious cases should be kept permanently in the open air under a shelter roof, and if champagne is procurable, a really desperate case should not be denied a few bottles of it.

6. I insist on the necessity for absolute rest until the wound is healed.

Tubes do very little draining, but are useful props to keep wounds patent for the evacuation of fluid, and also serve to establish a channel for drainage subsequent to their removal. In abdominal cases I usually omit the tube on the second or third morning; this practice is the result of what I have over and over again witnessed—a considerable rush of pent-up liquid the moment the tube is removed. In other words, tubes, like gauze saturated with secretion, may act as corks, as well as irritating—if not infective—foreign bodies. I change the tube or tubes within forty-eight hours, and substitute a new one once or twice daily until the sixth day, when it should be dispensed with altogether. In septic infection, other than abdominal, I strongly recommend lavage with "peroxide carbolic" each time a tube is taken out, and before a fresh one is inserted, so as to remove the secretion and débris which always hang about the track.

I rarely employ irrigation during operation in septic abdominal cases, as I dread diffusing septic elements into the recesses of the abdomen. I rely on thorough mopping up with dry bibules, and generally insert two large tubes right down to the seat of infection. It is essential to provide ample room around the tube for free exit of secretion; the long diameter of the opening left in the parietal wall should be at least three times the diameter of the ordinary "gas-pipe" tube employed. When the prop is removed on the third morning the factors which govern natural defence have encompassed the infected field with an adhesive barrier, which safely admits of gentle irrigation of the cavity with peroxide carbolic lotions, if such be considered necessary. Tight-fitting tubes in a septic abdomen are, in my opinion, a menace to the existence of the patient.

I have on many occasions attempted to hasten the healing of large wounds by secondary sutures, and while I have had some highly satisfactory results, I must admit that I have had more disappointing ones.

As to the treatment of post-septic wounds, healing up by some intention, my favourite applications are lotio

rubri, boracic ointment (gr. x to ʒ j), hot lead or boracic fomentations (ʒ j of each to litre) applied three times a day, plus absolute rest on a splint, until the wound is healed. This I combine with plenty of fresh air and a glass or two of stout, beer, or good wine with meals.

NOTE ON ACIDOSIS IN CHILDREN.

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It is probable that acetone, or diacetic acid, or both, are generally present in the urine of young children suffering from gastric disorders, but cases occur in which the amount of these bodies excreted is considerable, and their circulation in the blood causes a definite train of symptoms constituting a clinical entity which, for lack of a better term, may be called "acidosis." Such cases are very common, and form, I believe, a large proportion of the unexplained febriculae in children, but they are not diagnosed because the urine is not examined.

The children are usually between 3 and 10 years old, and the condition is equally common to the two sexes. A doctor is called in because the child is feverish and drowsy, or because it has been violently sick. The clinical features, varying of course in degree in different cases, are as follows:

Fever.—This may range from 100° to 103° F. or more, and in some cases is absent. In any case it is variable, seldom lasts more than one or two days, and exhibits no special features.

Vomiting.—About half the cases are violently sick, the stomach rejecting even water. These cases are those of so-called "cyclical vomiting" in children, but some of the worst do not vomit at all. The bowels are usually confined, but constipation may be absent.

Odour of the Breath.—In most of the cases the breath has an acetonous odour. This may be very faint, or so strong that it is detected on entering the room. It is, perhaps, the most constant symptom, but I have met with severe cases of the disorder in which it was absent.

Urine.—The essential symptom is the condition of the urine. This is generally pale, but it may be high coloured, and sometimes presents a peculiar greenish hue. It is acid, of high specific gravity—1025 to 1035—and contains diacetic acid, or acetone, or more often both. The amount of these bodies must in many cases be large, for a most intense colour reaction is given with ferric chloride, and the nitroprusside test for acetone acts deeply and quickly. Glucose and albumin are absent. A few cases have ended in jaundice, and then bile pigment may be associated with the poisons.

Prostration.—This is often considerable, but the urine may be loaded with the poisons and yet the patient appear fairly well. The child is, however, usually prostrated, half comatose, and obviously feels very ill. In one of my cases, a girl of 4 years, in which there was no vomiting, a definite meningism developed, with delirium attended by pronounced Kernig's sign. Complete recovery took place.

Treatment.—The obvious indications are to neutralize the poison and eliminate it. It is useless to give sodium bicarbonate. Despite the acid present, the blood still contains alkaline sodium salts, and nothing will be gained by attempting to introduce more. Potassium bicarbonate (as in the case of gout) is more effective. Reasonably full doses should be given, plenty of water administered, and fats excluded from the diet. The urine soon becomes alkaline, and the poisons disappear. The bowels should be freely opened with calomel.

I have recognized perhaps a hundred cases, and have not yet seen a fatal one, but the clinical picture is often very alarming.

As to the cause of the condition, little is definitely known. Imperfect metabolism of fats may produce the poisons, but what is the determining cause of this it is difficult to say. I have not been able to trace any case to any special error in diet. It appears to occur often in epidemics, and probably nervous disturbance, as in the recent air raids, may be a predisposing cause.