

can with assurance point to those of the nervous system as the most vulnerable to the attack of morbid agents.

With the multitudinous array of symptoms seen in many forms of nervous disorders, how natural it seems for us to turn to the avenues of elimination in search for a source of infection. Then, surely, auto-infection is a factor in nervous diseases.

### THE USE OF FORMALIN IN INFECTED WOUNDS.

BY A. L. CORY, M.D.

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My attention was called some time since to the use of a mixture of formalin and gelatin in infected wounds. A German firm placed the mixture on the market under the name of "glutol." Formalin is mixed with gelatin, which forms a solid mass; this is grated, forming a fine gray powder, in which state it is sold, to be dusted on the wound as we have been doing heretofore with iodoform or boric acid. An American firm have recently put the same thing on the market under its proper name, "formal-gelatin." It was claimed for it that when pus was present the gelatin would gradually dissolve in the secretions and liberate the formalin, which is a strong disinfectant, and thus keep up a continual action while any of the powder remained. On trial I failed to realize the good results except in superficial injuries, for instance in two cases of scalp wounds. At the second dressing, 48 hours after the injury, the skin around several of the stitches looked quite inflamed and seemed about to suppurate, but on the application of the powder and fresh gauze at the next dressing, four days after, the wounds were found entirely healed. In cases where the infection was deep and pus already formed I could see no benefit from the powder. At this time I had under my care one of the nurses of Englewood Hospital who had been operated upon for appendicitis. The external wound had by some means become infected and I had opened it widely down to the peritoneum. In spite of all the measures I could apply, including the glutol, the wound surface continued to suppurate, and a pocket formed under the skin, beyond the wound but communicating with it, from which pocket I could press out at each daily dressing about two drams of pus. It then occurred to me to try the formalin in solution. Knowing it to be very strong, I without any special reason chose to make it of the strength of 1 to 200, formalin 3i, water 3xxv. After the wound had been washed with sterile water until clean, I packed both it and the pus pocket with plain sterile gauze dipped in the above solution, and what was my surprise on the next morning to find no pus whatever. I again dressed it with the formalin, and at the end of another twenty-four hours removed it and dressed with iodoform, and the wound healed promptly without further formation of pus. At the same time I had under care a woman who had an Alexander operation for shortening the round ligaments, and in whom one of the wounds had become infected so that I had opened it widely for drainage. Two dressings of the formalin, 1 to 200, stopped pus formation, and the wound healed under iodoform without further suppuration. Since that time I have dressed all infected wounds, and we get many of them in railway surgery because of dirt ground into the wound at the time of the injury, with plain gauze

thoroughly wet with a solution of formalin 1 to 200, and have not had pus occur where the formalin could get to all parts of the wound.

I have had some wounds irrigated with the same solution, but do not get as good effects as where applied on gauze packed into the wound. In an amputation of the arm for railway injury suppuration occurred in the track of the drainage tube; here it was not possible to pack the entire tract with gauze, and irrigation seemed to reduce but not entirely stop pus formation. It would seem from my experience that the formalin must be held in place so that it may act on every part of the wound for several hours. In an acute case of gonorrhea in a woman, as proven by finding the gonococcus in great abundance, I had the vagina thoroughly douched, then packed it through a speculum with gauze wet with formalin 1 to 400. This was renewed for four days in succession, and the gonorrhea was cured.

My experience with the formalin has been so satisfactory that I desire others to try it and see if they can get the same good results.

I believe that with gauze dipped in the solution and the powder applied we have an ideal non-toxic dressing. With gauze wet with the solution packed in "pus pockets," and in gonorrhea in the female applied on gauze, we can get better results than with any other dressing used at present by the profession. I would not expect as good results in gonorrhea in the male, for there the formalin could not be retained long enough in contact with the diseased surfaces. In making my solutions I have used the formalin 1, as it is really a 40 per cent. solution of the gas called formaldehyde. I have continued the formalin as a packing material in my pus cases only long enough to stop the pus secretion. I do not know that it would be injurious, but knowing that it is being used as a fixative of fresh specimens for microscopic specimens, I have feared that its continued use would harden the granulations and delay the cure, so as soon as the suppuration has stopped I have used iodoform in powder and plain gauze as a packing to stimulate the growth of granulations.

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### TOBACCO AMBLYOPIA.

Read at the meeting of the Third District Branch of the New York State Medical Association at Auburn, N. Y.

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I shall make no attempt to present anything novel on the subject of tobacco amblyopia. It is a subject that has been much discussed during the thirty-three years since Jonathan Hutchinson first clearly connected failing vision with the inordinate use of tobacco. Still the pathology of the disease was not made clear until a dozen years ago and there is still much difference of opinion among writers upon the question of its real cause. But it is not even an attempt to clear up any one of these disputed points that I have had in mind in selecting this topic, but because I think that the ascertained facts in the case have been too much neglected by us as general practitioners. Until the ability to detect the condition is in the possession of the profession generally, it seems to me that many cases are bound to go unrecognized. Even if it is first diagnosed by the eye specialist, it can be best treated and its course followed by the family physician.