day is a specific in such case. This is also a good medicine, but scarcely infallible. Indeed it is more than doubtful if anything is absolutely certain. The wise practitioner, however, is ever ready to employ any means which the peculiarities of the case, or the experience of his fellows, may suggest; and in this, as in all other affections, will not be bound by prejudice simply to follow a beaten track, but be ready on any occasion to exercise his ingenuity to discover the best treatment for each case as it presents, always bearing in mind the intimate relation that exists between this disorder and nearly every phase of systematic trouble.

Perhaps one of the greatest evils associated with this form of dental disease is the fact that patients do not generally recognize the true cause of their trouble. Neuralgia, or *tic*, as they call it in some places, seems to be a sort of universal scapegoat, on whose back are laid all kinds of dental difficulties, and to get rid of which the patients will swallow any amount of physic before they wake up to realize wherein the mischief truly consists, and then too often the disease has passed into the suppurative stage. The last hint as to the treatment of periodontitis, therefore, is never to fail in warning a patient of the possible result in every case, where there appears any reason to suppose that sooner or later the disorder may appear.—*Canada Journal of Dental Science*.

ARTICLE X.

On the Application of Carbolic Acid as a Local Anæsthetic in Surgical Operations.

By J. H. BILL, M. D., Surgeon U. S. Army.

In conducting some investigations on the action, &c., of carbolic acid, the writer has made the following observations, which as they seem to be of practical importance, he communicates in advance of the other results:

All who have handled this substance must have noticed the tingling sensation (not unlike that produced by aconite)

in the finger tips and other parts touched by the acid, which presently passes into a greater or less anæsthesia. On trying to determine the amount of this anæsthesia with an ordinary æsthesiometer it was found not only impossible to distinguish two points, however widely separated, but even to recognize the presence of one.

The prick of the point was not felt at all as pain, nor was an incision productive of uneasiness. The experiment was, therefore extended thus: The radial side of the writer's left forearm was covered with a cloth soaked in a saturated solution for half an hour, then a streak was traced over the course of the radial artery with a camel's hair brush dipped in acid liquified by one-twentieth bulk of water. This streak extended from the styloid process to near the elbow, and after a few minutes was rubbed off. An incision was then made with a common scalpel from a point about two inches above the styloid process towards the internal condyle for five inches, occupying as near as possible the middle of the streak made with the brush, and extending down to the fasciæ investing the flexor muscles (superficial) of the thumb and fingers, so that at its lower extremity the radial artery was exposed and could have been ligated. This incision was unattended with pain, save where nerves distributed to or passing over the muscular fasciæ were pricked or divided, and even in this case the pain was not at all unbearable. *The incision of the integument was painless,* and the writer would have been unconscious of the injury save from the sensation communicated to his hand holding the knife as it was drawn through the tissues. This observation or experiment was made nearly a year ago. It was applied practically at once to all minor cutting operations. The writer has not incised a felon or bubo since without successfully employing this method for preventing or greatly mitigating pain. Many cases could be given, one will suffice. David Harris, of Vancouver, applied with his second finger of the left hand highly inflamed from a felon, the parts much injured by burrowing of pus. A previous felon had been

treated on another finger a few months before, and the requisite incision had given him exquisite pain; the patient therefore apprehended great suffering on the finger now diseased, and begged for chloroform. However, the finger was soaked for fifteen minutes in warm water containing three per cent. of carbolic acid, dried, and then a brush dipped in the concentrated acid, drawn over the finger in the course of the intended incisions. These, two in number, were then made, using a thin edged scalpel by a slow sawing motion, allowing only the weight of the knife to make the cut. The patient stated that he had suffered no pain, or not more than would have resulted from handling the parts. The parts healed at once. Sometimes it is necessary after making an incision nearly through the integument, if sensibility becomes apparent, to brush out the wound made with some liquefied acid before extending the incision deeper. This was necessary in a palmar abscess treated by this method without pain. The writer has excised a small tumor partly by this plan. Buboës have been operated on painlessly, and, in short, the writer can recommend the plan in any cutting operation where no dissection of the skin is involved, and where all the pain results from the cutting of the skin. It is hoped that it will be of special service to those who are compelled to operate without an assistant. The writer was thus compelled this summer to remove from his right hand, by an incision of over two inches in length, a large wooded splinter which had been thrust through the palmar fasciæ, and had lodged under the tendon of the lumbricalis of the index finger. It was done without pain, save where a nerve was divided. The incision healed without scar.

These facts, which the writer believes he is the first to point out, have theoretrical relations of great interest which may be discussed in a future paper.—*American Journal of the Medical Sciences.*