

Clinical Department.

A CASE OF TRICHINOSIS: DEATH, AUTOPSY.

BY EDGAR GARCEAU, M.D.,

Surgeon to Out-Patients Free Hospital for Women, Boston.

O. R., a German thirty years old, an engineer in a brewery, was a married man of strong physique. In the spring of 1892, while at a sort of picnic he ate some raw smoked ham. Many of his friends who also ate some of the same ham were taken violently ill the day after, with severe vomiting and purging, but they all eventually recovered. He himself was not taken ill at once, which fact he thought was accounted for because he ate only a very small piece. For two weeks afterwards, however, he was not himself. He felt miserable; his appetite was gone; he had backache and pains in the limbs; was weak and listless and disinclined to work.

As these symptoms increased and as he began to feel feverish, he sent for me (April 12th). This was exactly two weeks after eating the ham. He mentioned the circumstance particularly because he had learned of the illness of his friends, and was afraid that he might have been "poisoned" also. He was very restless, and had not slept for three nights. There was no great pain anywhere, but the muscles of the calves of his legs and of the arms and back were sore and lame. He could, however, move them about freely without much inconvenience. There was some sensitiveness to light, and it hurt him a little to move his eyes. The bowels had been regular, and there had been no symptoms of intestinal irritation. The mind was anxious. On examination a few red spots were seen on the abdomen, which disappeared on pressure; the bowels were soft and not tender and there was no gurgling; the spleen was of normal size; the pulse was somewhat dicrotic, and its rate, 120; temperature, 103.5°; face, red; eyes, bulging in the sockets, and the conjunctivæ red and swollen and raised above the level of the corneæ, giving the latter a punched-out appearance.

The next day, April 13th, he was worse. He had not slept at all. There had been three very loose movements from the bowels, watery and of pea-soup consistency, and odorless. The pain in the muscles had increased, and motion began to be painful. His face was livid; the pulse, 130; temperature, 104.5°. He was very restless, and insisted on getting some sleep. There had been some vomiting.

On April 14th there was a slight improvement. He had slept a little and the temperature had dropped; there was less pain in the limbs, and there had been profuse sweating. On the whole he looked brighter. The loose stools continued. The eyes were still bulging, but were not so sensitive to light. In the afternoon there was some vomiting and also some coughing. The voice also began to get a little husky. Temperature, 104°. Towards evening, after giving a subcutaneous injection of morphine, he dozed a little.

Dr. P. O'M. Edson was now called in consultation. He thought the diagnosis lay between typhoid fever and trichinosis, with the presumption in favor of the former disease for the following reasons: (1) the prodromata of malaise, backache, pain in the limbs, uneasiness; (2) the sleeplessness; (3) the gradually rising fever; (4) the characteristic typhoid dejections; (5) the rose spots. But, on the other hand,

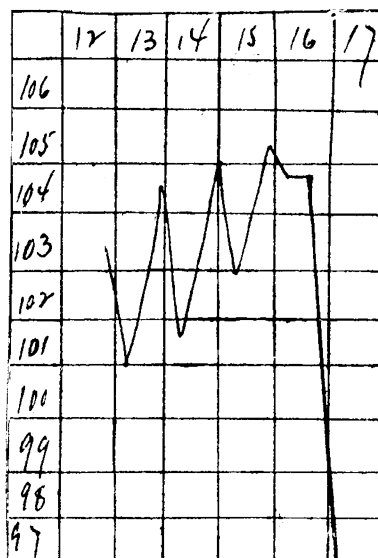
trichinosis is suggested by (1) the well-marked history of severe illness in others who ate the same ham; (2) the ocular and laryngeal symptoms.

April 15th. Much the same. The pains are more severe. Mind is clear.

April 16th. Much worse. Voice is now husky and cracked. Pulse very weak and somewhat irregular. Morphine has to be given freely to control the pains in the muscles which have become intolerable. The disease looks more like trichinosis.

April 17th. Completely collapsed. He died in the afternoon.

The treatment was merely palliative. Narcotics were used with great freedom, and controlled pain only moderately. Stimulation was pushed to the utmost limit.



A partial autopsy was allowed. An incision was made over the muscles of the calf of the leg and a small portion of muscular tissue examined. No difficulty was experienced in finding the characteristic trichinæ.

This case was interesting from its rarity. While it was perfectly typical, yet at the same time, on account of its rarity and its great resemblance to typhoid fever, the diagnosis was masked for a considerable while. Towards the end, however, there was little doubt about its nature.

To sum up, we have in the first place the history of the case and the period of incubation, two weeks, during which time the trichinæ were migrating from the intestines to the muscles. If the patient had eaten a good deal of ham it is probable that he would have escaped as the others did, by the violent vomiting and purging. This suggests that a cathartic be given in these doubtful cases to clear out the trichinæ. In this patient's case all the trichinæ swallowed had a chance to propagate, and the number propagated may be inferred when it is said that a single female trichina may produce more than a thousand embryos. The next symptom somewhat characteristic of trichinosis was the fever; it was high and had marked remissions. The severe muscular pains are also characteristic, but still it is by no means rare to meet with the same pains in typhoid. Strongly suggestive of trichinosis was the implication of the laryngeal muscles

as evidenced by the husky voice; this appeared late in the disease. The ocular symptoms were still more suggestive, and were noticed early in the disease. The edema of the conjunctivæ was very marked. It generally affects the eyelids, but in this case, curiously enough, the conjunctivæ were affected. It was this symptom which first aroused my suspicions as to the nature of the disease. The intestinal symptoms deserve mention. Purging is usually of common occurrence in trichinosis. The insomnia and rose spots need not be considered; they are met with in both diseases. The normal spleen furnished valuable negative evidence. Taken as a whole, these symptoms are, in connection with the prodromata, very much similar to those of typhoid; and, indeed, it was not until I had made the autopsy and had seen the trichinæ that I felt absolutely sure that the disease was not typhoid but trichinosis.

Fourteen per cent. of the Massachusetts hogs killed for food are infested with trichinæ. Of the Western animals which feed in the fields and have, therefore, relatively clean food only two per cent. are infested. The examination of these animals in the Massachusetts pork-packing establishments is very rigid and is regulated by law, so that the inspected pork may be said to be fairly safe. In this case the trichinosis was caused by eating ham which was not inspected; it was from an animal which was killed by a local butcher. As the ham was not boiled but merely smoked, it is not surprising that it caused trichinosis.

THE NEW SURGICAL SPLINTING.

A FURTHER REPORT OF CASES EXEMPLIFYING IT.

BY EDWARD A. TRACY, M.D., BOSTON,
Fellow of the Massachusetts Medical Society.

At the Baltimore meeting of the American Medical Society last May, I reported cases illustrating the efficiency of four new splint forms devised by me: a latero-posterior splint for knee-joint fixation, a splint for hip-joint fixation, an external lateral elbow-splint, and a splint for the treatment of rib injuries. All of them were moulded on the patients; the material used being that devised by me for surgical splints and spinal jackets, and fully described in an original paper read before the Pan-American Medical Congress in Washington, 1893. Concisely defined, the new splint material is crushed wood-fibre rolled in a rugose manner, and in which layers of a loosely-meshed fabric is embedded during the rolling process. It is manufactured by the American Wood-Pulp Company, Boston. This material gives a most efficient and scientific surgical splinting, as demonstrated by the splints constructed from it for a variety of surgical injuries by brother practitioners and myself.

I say "a most efficient and scientific surgical splinting" for the reason that each splint is moulded upon the patient, and meets all the indications of the individual case at the will of the surgeon, who, in fact, creates the splint.

A number of such splints demonstrating this statement were shown at the annual meeting of the Massachusetts Medical Society in June last; at the Baltimore meeting of the American Medical Association last May; at the meeting of the Southwestern Arkansas Medical Society, through the courtesy of

Dr. Wilson; and to the Philadelphia Academy of Surgery (in the beginning of the year), through the kindness of Dr. Wm. J. Taylor. In this paper I shall report briefly three cases for which splinting was devised.

CASE I. The first is a case of fractured humerus, at the junction of middle and upper third, communicated to me orally by Dr. M. F. Gavin (surgeon at Boston City Hospital).

The case was in Dr. Gavin's private practice, and the splinting was devised and applied by him. The details of the progress in this case I do not recall, except that the result was excellent. The splinting consisted of a shoulder-cap extending to the elbow, and a small splint moulded over the inner surface of the arm, its middle laying over the seat of the fracture. A diagram of the shoulder-cap, indicating its construction, is shown in Fig. 1.

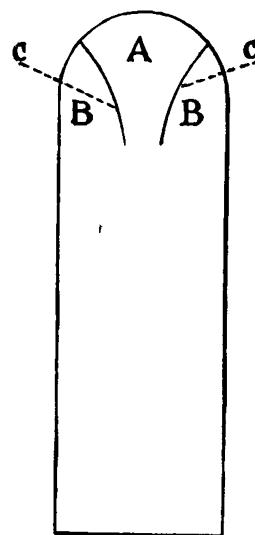


FIG. 1.

Diagram of shoulder-cap. Explanation: *cc* are the lines of incision in the splint-blank, starting from the upper part of the cap and converging towards the portion made to lie over the head of the humerus. After moistening the splint-blank, the part *A* is moulded over the shoulder and the parts *BB* are moulded over the part *A* and the arm. After drying—which can take place upon the arm—the moulded splint retains its form, because of the rigidity of the splint material.

The splinting was made from my wood-fibre splint material having a thickness of two millimetres. It was moistened with water and allowed to dry upon the arm. The process of splinting occupied but a few minutes. The splints were omitted after three weeks' application. This case illustrates a very simple method of making a shoulder-cap which for efficiency, lightness and cheapness I believe cannot be excelled.

The remaining cases, a compound fracture of the forefinger, and compound fracture of the toes, were treated by the writer; the splinting is original.

CASE II. T. L., laborer, entered my office with distal phalanx and tissues of left forefinger covering it crushed by machinery. The finger was dressed antiseptically, and a splint blank cut from a thin sheet of the wood-fibre splinting. It was cut so as to cover the forefinger except its internal, that is, ulnar aspect, and also sufficient of the dorsum of the hand to immobilize the proximal joint of the finger and also to secure the splint's better retention by a bandage over the hand. The accurate shape for the splint blank