Tetany, and foreign bodies in the stomach : tetany caused by a mass in the stomach, composed of forty metallic articles, weighing one pound, gastrotomy, cured / by James P. Warbasse.

Contributors

Warbasse, James Peter, 1866-1957.
Royal College of Surgeons of England

Publication/Creation

Philadelphia, Pa. : J.B. Lippincott, 1904.

Persistent URL

https://wellcomecollection.org/works/cah6mbx9

Provider

Royal College of Surgeons

License and attribution

This material has been provided by This material has been provided by The Royal College of Surgeons of England. The original may be consulted at The Royal College of Surgeons of England. where the originals may be consulted. Conditions of use: it is possible this item is protected by copyright and/or related rights. You are free to use this item in any way that is permitted by the copyright and related rights legislation that applies to your use. For other uses you need to obtain permission from the rights-holder(s).

wellcome collection

Wellcome Collection
183 Euston Road
London NW1 2BE UK
T +44 (0)20 7611 8722
E library@wellcomecollection.org
https://wellcomecollection.org

Vol. XXXVII. MAY, 1903 No. 5

ANNALS OF SURGERY

A Monthly Review of Surgical Science and Practice.

Edited by LEWIS STEPHEN PILCHER, M.D., LL.D., of New York.

With the Collaboration of

J. WILLIAM WHITE, Ph.D., M.D., of Philadelphia. SIR WILLIAM MACEWEN, M.D., LL.D., of Glasgow.

W. H. A. JACOBSON, M.Ch., of London.

TABLE OF CONTENTS

Published Monthly by J. B. LIPPINCOTT COMPANY, Philadelphia, Pa.

ROYAL COLLEGE OF SURGEONS OF ENGLAND
20 MAY 09
LIBRARY

TETANY, AND FOREIGN BODIES IN THE STOMACH

BY JAMES P. WARBASSE, M.D.,

New York, N. Y.

Reprinted from Annals of Surgery, December, 1904

TETANY, AND FOREIGN BODIES IN THE STOMACH.

TETANY CAUSED BY A MASS IN THE STOMACH, COMPOSED OF FORTY METALLIC ARTICLES, WEIGHING ONE POUND; GASTROTOMY; CURED.

BY JAMES P. WARBASSE, M.D.,

OF NEW YORK,

Surgeon to the German Hospital, Brooklyn.

In 1869, Kuessmaul and Neumann showed that certain gastric disturbances, notably dilatation of the stomach, bore an etiological relation to tetany. Since that time a sufficient number of cases have been observed and added to the literature, to show that dilatation of the stomach, with or without pyloric obstruction, particularly when associated with abnormal retention and fermentation of food, is a cause of tetany. The cases which have supported this conclusion have also been of importance, because they have made possible a more accurate study of tetany, a complex train of symptoms which previously had been confused with tetanus, epilepsy, and other nervous phenomena.

The most acceptable theories concerning the cause of these attacks are those which attribute them to autointoxication from fermentation of stomach contents and irritation of nerve endings in an already poisoned organism. The characteristic attacks of convulsions usually follow an effort of the affected stomach to empty itself. A patient, who has suffered with chronic atony of the stomach, or dilatation from narrowing of the pylorus, and abnormal fermentation of retained food, after an effort at vomiting, or the passage of the stomach-tube, is seized with a convulsive paroxysm similar in some respects to both that of epilepsy and tetanus. A great variety of spasms have been described by different observers. The characteristic attack begins with tetanic spasms of the muscles of the forearm and hand or abdominal muscles, and is rapidly followed by

tonic contractions of the muscles of the extremities, back, and neck. Usually there is loss of consciousness. The picture is often that of epilepsy with tetanic contractions of the muscles of the limbs and back. There seems to be no typical course of the convulsive movements. A peculiar position of the hand in these attacks is described as accoucheur's hand, the metacarpophalangeal joints being flexed, the phalangeal joints extended, and the thumb adducted.

The mortality among these cases under medical treatment is reported to be 88 per cent. Of the cases operated upon, nine in all (including the case herewith reported), the mortality is 33 per cent.

Kuchein (*Berliner klin. Wochenschrift,* November 7, 1898) has reported a case due to carcinoma of the pylorus, associated with gastric dilatation. He attributed the tetany in this case to increase in the specific gravity of the blood because of the diminished absorption of fluids. This is in sympathy with the original views of Kuessmaul. Juergensen has reported a similar case (*Archiv für klin. Med.,* Vol. lx). He attributes the symptoms to autointoxication. Sievers (*Berliner klin. Wochenschrift,* August, 1898) collected reports of twenty-seven cases, three of which were associated with carcinoma of the stomach. The majority of cases of gastric tetany have been found complicated with dilatation of the stomach, following pyloric stenosis due to gastric ulcer.

Mayo Robson, who first presented the surgery of this condition, regards autointoxication from gastric fermentation as the predisposing cause; and the exciting cause he believes to be the reflex irritation caused by painful contraction of the stomach. Albu, Germain-See, and Berlizheimer have recognized the importance of mechanical gastric irritation as an etiological factor. Blazicek has reported a case in which the dilatation of the stomach was due to duodenopyloric obstruction from the pressure of a large gall-stone; and Berlizheimer has reported a case in which the same condition was due to the pressure upon the duodenum of a pancreatic cyst. I have been unable to find in the literature the report of any case due to foreign bodies in the stomach.

Cunningham, in an admirable paper on this subject in the ANNALS OF SURGERY, April, 1904, to which the reader is referred for literary references, records the seven cases which have been treated surgically, and adds to these an eighth case from his own observation. Three of these cases were reported by Mayo Robson, two by Fleiner of Heidelberg, one by Gumprecht, and one by Caird. Robson's cases were due to cicatricial stenosis of the pylorus, and were treated by pyloroplasty, the third case requiring a subsequent gastro-enterostomy. All were cured. The first of Fleiner's cases was due to sarcoma of the pylorus, and died after gastro-enterostomy. Fleiner's second case was due to inflammatory stenosis of the pylorus, and was treated by pyloroplasty. This case died ten days later. Gumprecht's case was one of cicatricial stenosis of the pylorus. It was treated by resection of the pylorus, and died of general peritonitis. Caird's case, reported by Dickson, was one of inflammatory stenosis, and was cured by gastrojejunostomy. The case reported by Cunningham, and operated upon by Watson in the Boston City Hospital, was one of cicatricial stenosis, and was cured by gastro-enterostomy.

The following case, which I operated upon in the German Hospital in Brooklyn, is of importance because the gastric tetany was caused by foreign bodies in the stomach, and was not associated with obstructive disease of the pylorus or obstructive dilatation in the ordinary sense of the term,—two conditions which had heretofore been regarded as concomitants of gastric tetany. The case is also of interest because of the number and character of the foreign bodies, and the information which it contributes to the physiology of the stomach.

J. F., male, twenty-three years old, German, married, tailor, entered the German Hospital, May 1, 1904. Healthy, well-developed man. No venereal history. No previous illnesses or family history of epilepsy. Drinks beer moderately. Married four years. Wife has one child two years old. Appetite always good. No eye symptoms.

In 1897 he began giving exhibitions swallowing metallic objects, such as nails, pins, and other small articles. He did not

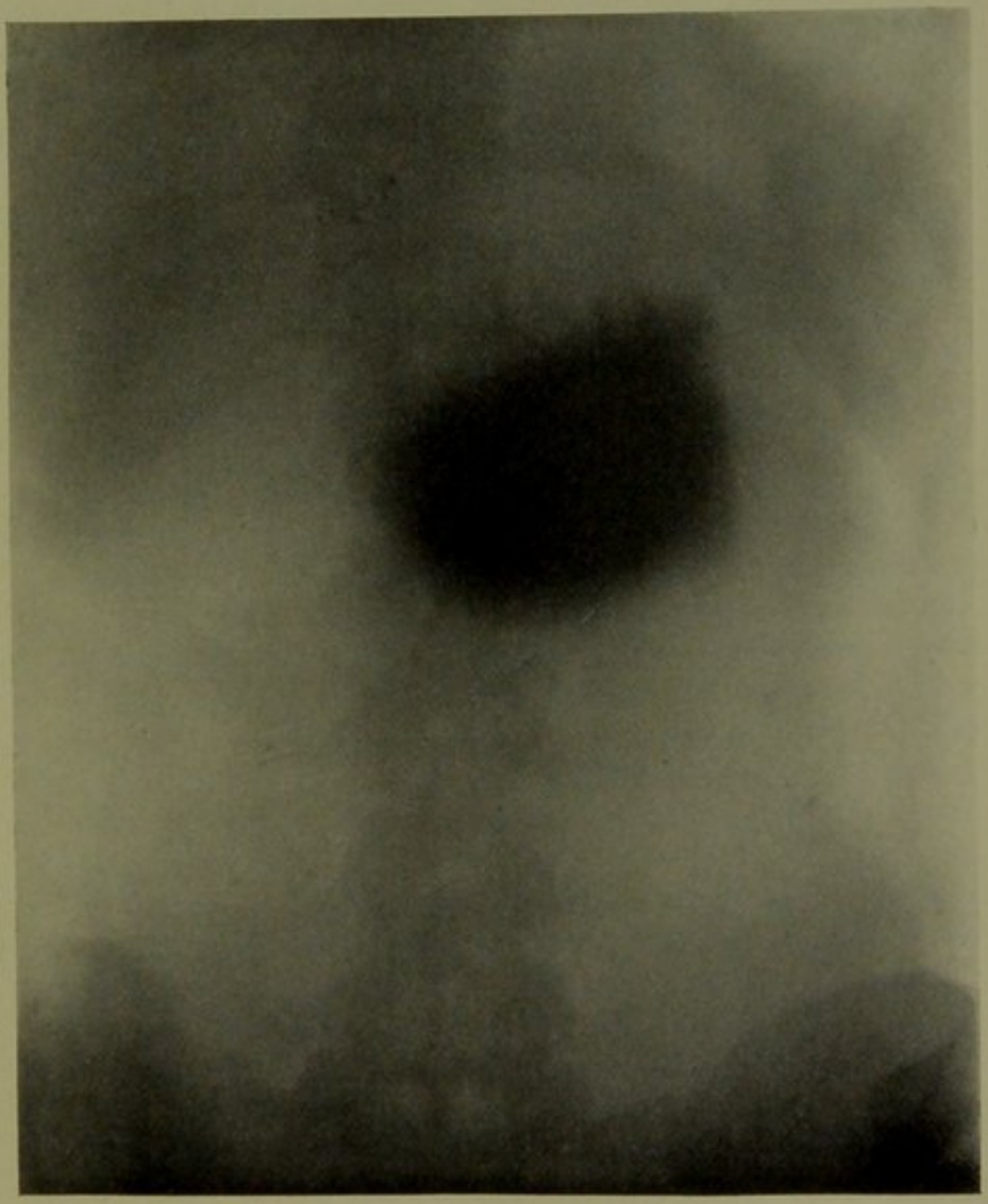


FIG. 1.—Showing mass of metallic materials lodged in cardiac end of stomach.

ROYAL COLLEGE OF SURGEONS OF ENGLAND
20 MAY 09
LIBRARY

swallow many of these things at one sitting, and usually found them in the bowel movements within twenty-four hours. He continued giving these exhibitions, as a means of livelihood, without mishap until August, 1900, when he fell in an unconscious state after having swallowed several nails and a watch-chain. In this attack there were severe abdominal cramps, and he was removed to St. Catherine's Hospital. No satisfactory history of this attack is obtainable. He did not remain in the hospital, but immediately resumed his occupation of giving exhibitions. In September following, he was particularly busy, swallowing as many as twenty ordinary pins, together with hair-pins and wire nails, during the course of an evening's entertainment. These things he believed all passed per anum. On one evening he swallowed eighty pins.

On December 16, 1900, after swallowing two or three watch-chains, he had another attack of unconsciousness, with convulsions, which had been preceded by violent vomiting. He was removed to St. John's Hospital, where he was retained for five weeks. During the first two weeks at the hospital he continued to pass metallic articles which he had swallowed. He complained of epigastric cramps, and during the time had a number of convulsive seizures. These he describes as following vomiting. Some of the convulsions were extremely violent. He had such a convulsion on January 2, completely turning around in bed until his head was at the foot. The following day a gastrotomy was done, and the following articles were removed: one hundred and twenty-nine ordinary pins, five hair-pins, two horse-shoe nails, twelve wire nails, two keys, and two watch-chains. He made a good recovery, and was discharged three weeks later. No satisfactory history of the tetanic seizures is obtainable. In these attacks pain was not a symptom. It is spoken of by those who saw him in convulsive attacks, because the attacks were wrongly supposed to be manifestations of pain.

He continued in fairly good health. He followed his vocation, swallowing articles passed up from the audience, and was known as the "human ostrich." He increased the number and size of articles consumed, but had no bad immediate attacks. He has suffered with frequent cramps in the calf of the right leg during the past two years. This cramp often awakened him from sound sleep, and was so severe that he would jump out of bed and walk in order to get relief. Coitus was always followed in

about five minutes by this cramp. During the past year he has had a choking sensation and difficulty of breathing, apparently due to spasms of the throat muscles. This choking sensation was frequent and annoying. He also had occasional cramps in the muscles of the back.

On July 16, 1903, while on a street-car, he was seized with a convulsion, and fell from the car. He was removed to the German Hospital, where he had several such attacks. He remained in the hospital only over night. On March 12, 1904, he swallowed six horse-shoe nails, eight wire nails, two padlock keys, one large brass key, and one pocket-knife, and had a tetanic attack. Several of these articles failed to appear in the stools. On April 30, 1904, he swallowed some nails, keys, and two watch-chains. While still on the stage he was seized with vomiting, spasm of the throat muscles, and fell unconscious in a tetanic attack. He was removed to the German Hospital.

In this, as in the previous attack, there was a succession of spasmodic seizures. Practically, all of the voluntary muscles were involved,—legs, arms, neck, face, and extensors of the trunk. Often the contractions of the extensor muscles of the spine and legs were so strong as to cause the whole body to bound from the floor in a position of opisthotonos.

Sometimes during the intervals between attacks the patient regained consciousness, and entered into conversation, at other times the spasms followed in quick succession. These seizures presented three stages: (1) All of the attacks were preceded by vomiting or a violent effort at vomiting. (2) This was always followed by a sensation of choking, as though he were being strangled, and could not get air,—evidently a spasm of the glottis muscles. (3) He then fell unconscious to the floor, and the convulsions immediately supervened. During the first two stages there was always a sensation of dizziness. After from one to six or eight convulsions the attack subsided, and the patient went about his business.

Fluoroscopic examination and an X-ray picture (Fig. 1) showed a mass of foreign matter in the region of the cardiac end of the stomach. This mass was in the form of a ball or nest; no separate foreign substances could be detected in any other location. Further examination on the following day showed the abdomen to be flat and free from peritoneal irritation. There was slight ten-

ROYAL COLLEGE OF SURGEONS OF ENGLAND
20 MAY 05
LIBRARY

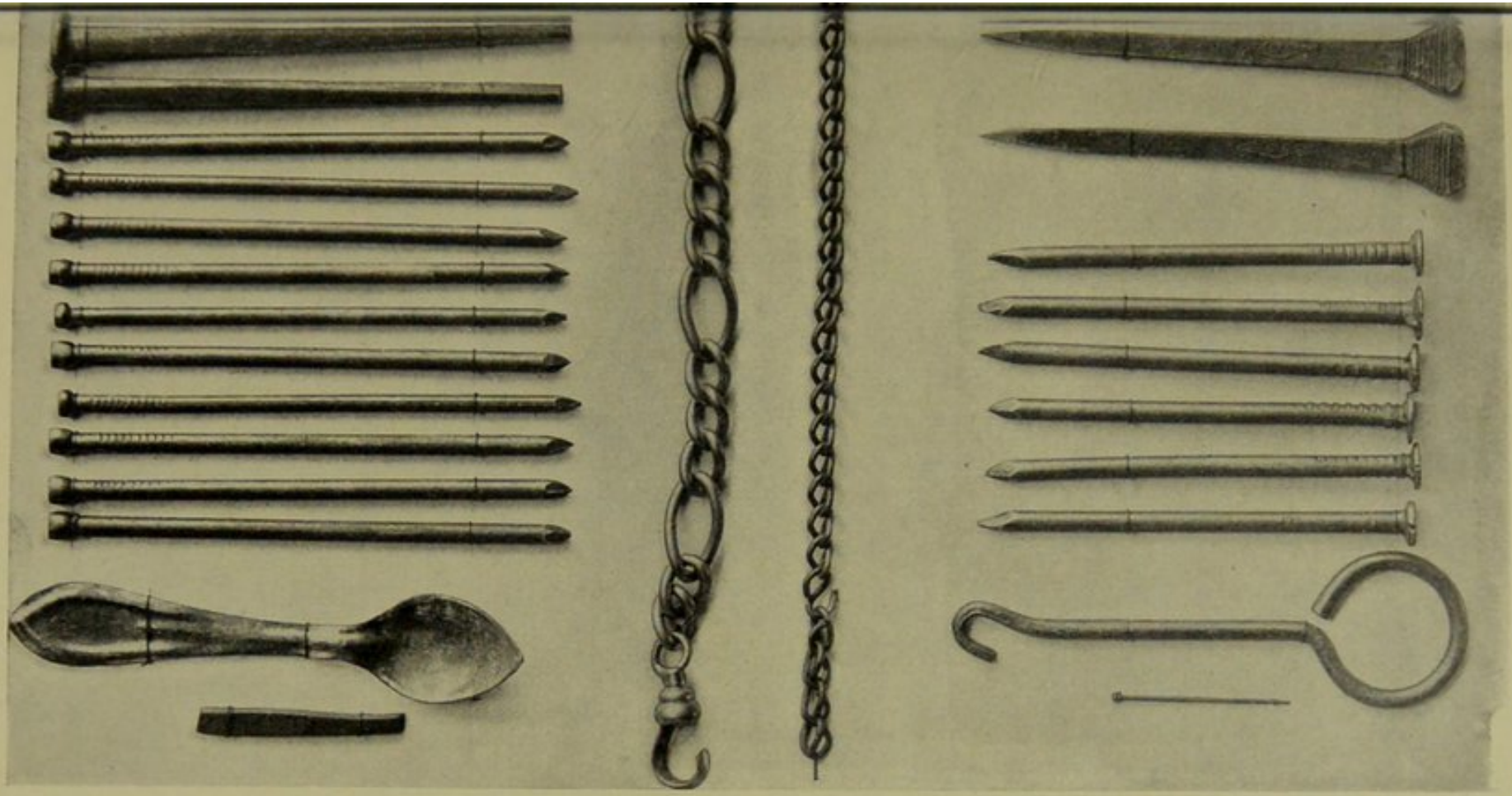
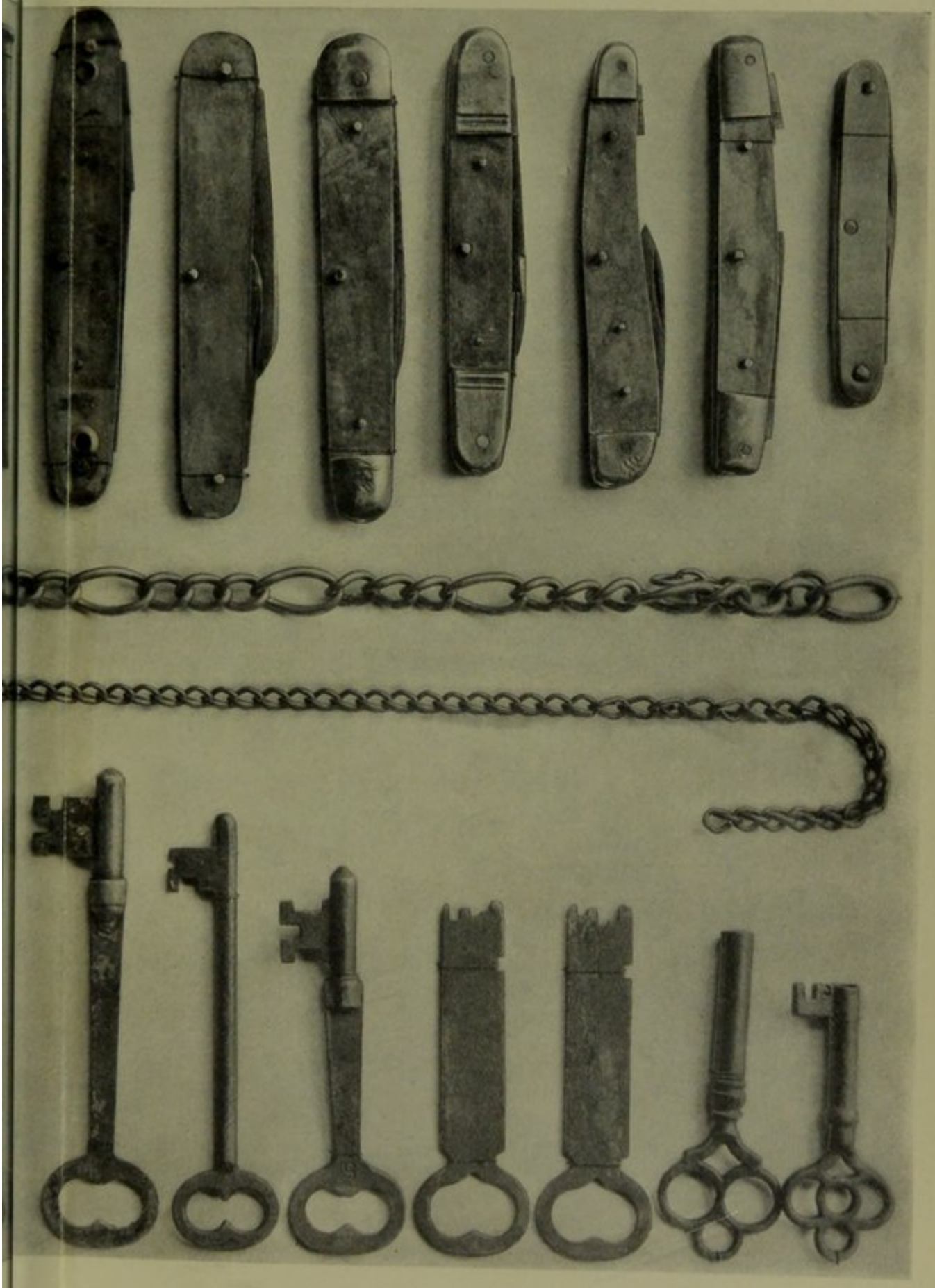


FIG. 2.—Forty metallic articles, weighing one pound, removed from stomach of J. F. at the German Hospital, Brooklyn, New York, May 3, 1904. Pearl and bone handles digested from knives. Operation by Dr. J. P. Warbasse.



ROYAL COLLEGE OF SURGEONS OF ENGLAND
20 MAY 09
LIBRARY

derness over the cardiac end of the stomach. The patient's general physical condition and morale were excellent. There was a scar of median operation above the umbilicus.

Operation, May 3. Abdomen opened through left rectus muscle, and stomach brought into wound. Stomach secured with two supporting silk sutures. Transverse opening made in stomach over cardiac end. The hand introduced in this opening discovered a mass of metallic substances felted together and bound by chains into a nest. This was separated, and the following articles removed (Fig. 2): Seven pocket-knives, seven door-keys, twenty nails (two and one-half inches long), one small spoon, one button-hook, an ordinary pin, a knife-spring, and two watch-chains (one gold-plated, the other silver). The total weight of these things was sixteen ounces. The mucous membrane of the stomach appeared slightly congested, but otherwise normal. The musculature was apparently not hypertrophied. There were no peritoneal adhesions or evidences of irritation, excepting the adhesion of the stomach to the former scar. There was some dilatation of the left end of the stomach, induced by the weight of its contents and the ineffectual efforts of expulsion. The adhesion of the stomach to the former scar, which was about in the middle of the organ, had encouraged the development of a cardiac pouch. As is shown in the radiograph, taken in the recumbent position, the mass is lower than the normal location of the lower border of the stomach. The stomach wound was closed with chromic gut sutures, and the slack of the stomach wall taken up about two inches by making a longitudinal fold, approximating two surfaces about an inch broad. The patient was kept on nutrient enemata for five days, being allowed a small amount of water by mouth from the first. At the end of five days he was permitted fluid diet, and two weeks after the operation full diet. He was discharged from the hospital cured at the end of three weeks.

An examination of the material removed from the stomach showed that the pearl and bone handles had been digested from the knives. There were a few particles of food and considerable mucus mixed with these things. The patient recognized one knife that he had swallowed five months before. The button-hook had been swallowed ten months before. It is evident that during the past year the stomach always contained some metallic foreign

bodies. Articles remained in the stomach until they became disentangled and then passed on.

The copper parts of the knives were not bright, but dull in appearance, and there were no gross evidences of the presence of the chloride of copper. Nor did the patient present any symptoms of poisoning from copper salts. His appetite was always good.

The symptoms of tetany in this case were not recognized until after the operation, when a history of his recent attacks was obtained, and the facts concerning previous attacks inquired into. The symptoms described by Trousseau, Chevostock, Erb, and Hoffmann were not elicited. This man, as was the case with the patient reported by Dr. Cunningham, had repeatedly fallen in tetanic convulsions, and been in three different hospitals, and the disease failed of recognition. The peculiar and dramatic interest attracted by his other condition undoubtedly turned attention from the more important and interesting tetanic feature of the case.

The cause of this man's symptoms cannot be found in pyloric stenosis. What moderate dilatation he had was due to the dragging down by the weight of foreign matter, and to the efforts of the stomach to empty itself of a mass that could not pass through the pylorus. As a matter of fact, a normal pylorus may be the cause of dilatation of the stomach if it is not large enough to accommodate the contents which the stomach is trying to extrude. As far as the effect on the stomach wall goes, it amounts to the same thing as stenosis of the pylorus. As to fermentation of food particles among the foreign bodies, it would seem probable that enough of the chlorides of iron and copper would be evolved to inhibit this. It seems to me that this case speaks for the mechanical theory of the etiology of gastric tetany.