

## A STONE REMOVED FROM THE ESOPHAGUS OF AN INSANE PATIENT.

DR. H. ARROWSMITH, Brooklyn, N. Y.

Subject to future correction, I venture to present this stone as the largest unyielding, rigid and "unmanipulatable" (if I may coin a word) foreign body extracted entire by means of per oral endoscopy, to this date. Some dentures may have had a greater superficial area and some meat masses a greater cubic content, but such articles have been susceptible of compression, rotation or other change of presenting surface, or of piecemeal removal.

On February 17, I was asked by Dr. Gordon Gibson, Attending Surgeon to the State Hospital for the Insane, at King's Park, Long Island, to remove a foreign body, supposedly a pebble, from the esophagus of a patient at the Institution.

Joseph L., twenty-eight years of age, a painter by trade, suffering from dementia praecox, reported on February 16 to Dr. R. E. Blaisdell, the house officer under whose care he was, that he had a "pain in his throat." On being questioned, he admitted having swallowed "a pebble about as thick as his finger and somewhat longer than that diameter," the previous day. He refused to attempt to swallow solids, and liquids were promptly regurgitated, mixed with blood. A stomach tube was passed and halted ten inches from the incisors. The insertion of a probang, which I am assured was gentle and careful, corroborated the presence of an obstruction at that point. Owing to the lack of an X-ray apparatus in the hospital's equipment, no radiographs could be made to determine the size, shape and position of the foreign body.

On the afternoon of February 17, with the assistance of Drs. Gibson and Blaisdell, and in the presence of a number of the hospital staff, the patient being under oil-ether colonic anesthesia (Gwathmey's method), I passed the medium-sized Mosher ballooning esophagoscope, noting that there was absolutely no laryngeal stenosis, although the arytenoids were distinctly abraded, slightly swollen and bled easily (though moderately), the same being true of various areas in the esophagus. Ten inches from the incisors, I stopped at a foreign body, covered with a thick bloody secretion. After cleansing, this was seen and *felt* to be a stone. The rather swollen esophageal wall could be pushed away from the intruding mass to a very limited distance, not enough to

make me feel safe in attempting to pass any instrument down beside the foreign body. Inspection of the accessible presenting surface convinced me of the futility of attempting to seize and extract the stone by forceps.

Rather forcible ballooning distended only a very small part of the left lateral wall of the esophagus and through the lumen, thus indicated, I passed the Jackson mechanical spoon, keeping the spoon blade in contact with the left surface of the stone. When the spoon was felt to be free to move, I turned it to a right angle and pulled upward, with force enough to break the instrument, but not to budge the stone. Fortunately I had with me the Jack-

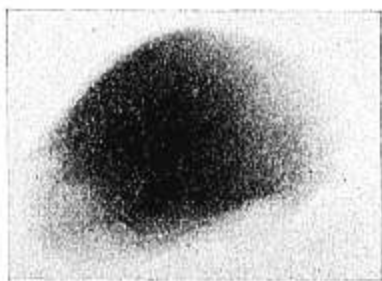


Fig. 1.



Fig. 2.

son safety-pin closer, made on the same principle as the mechanical spoon. This was introduced in the same way, the tube lip was pressed firmly against the upper surface of the stone, the right against the tube end. Tube, stone and pin closer were slowly withdrawn together. I estimate the tractive force necessary to start the withdrawal at a minimum of 40 pounds, probably it was more. The stone escaped from the instrumental grasp in the pharynx and was finally delivered by the operator's finger. It measured 2 by  $1\frac{3}{8}$  by 1 inch, the greatest impacted circumference being  $3\frac{3}{4}$  inches; its weight was 630 grains.

Immediately after extraction, the respiration became very slow and shallow and the patient was markedly cyanotic. I at once

again passed the esophagoscope, assured myself that the larynx was unobstructed and found that the esophagus, though somewhat more abraded than on the first inspection, was not lacerated and that the bleeding was negligible. A hypodermic injection of atropin 1-50 grain was given, and I asked Dr. Gibson to do a tracheotomy, although I was certain that the air passages were patent. Immediately after introducing the tracheal tube, the patient resumed normal breathing and the cyanosis quickly disappeared. I attribute this to the stimulation by the impact of cool air on the tracheal mucous membrane. The respiratory failure was due,

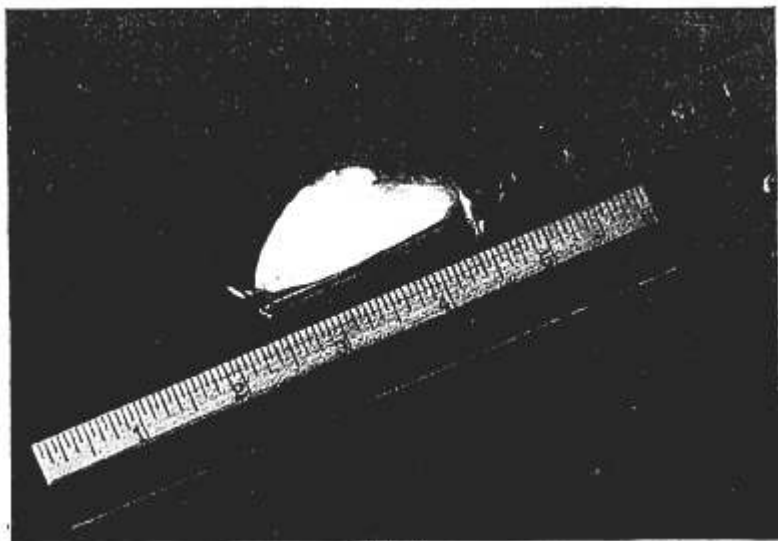


Fig. 3.

I am convinced, to a vagus reflex inhibition from the forcible removal of the stone, the degree of force, in my opinion, being entirely justified by the exigencies of the patient's condition and the nature of the foreign body.

The tracheal tube was removed the next morning and the patient could swallow without much difficulty. Three days afterward he passed "three smooth white pebbles about the size of ordinary marbles, some sand and the split half of a lead pencil about two inches in length."

How a mass of this form and texture could have been induced to make its original entry is beyond my comprehension. It is, perhaps, an interesting fact that the greatest diameter in contact with the esophageal walls lay antero-posteriorly instead of transversely, as is usual.

This experience emphasizes Jackson's counsel: Study the problem presented in each instance, before commencing the mechanical attempt at extraction.

It also accentuates my previous conviction of the importance in the endoscopist's armamentarium of Mosher's esophagoscope, without which in the present instance, handicapped by the lack of radiographic information, I would have been strongly tempted to abandon any effort to remove the foreign body. Thanks to Jackson's inventive genius, the means of removal were also provided, in mechanical principle if not by intent. His recently devised spoon forceps, evolved from the early mechanical spoon, if modified to meet distant esophageal problems, will solve many future riddles which may be presented.

The time consumed in the actual examination and instrumentation of this patient was about ten minutes.

My sincere thanks to Dr. N. C. Beers are proffered, for his admirable photographs, showing the stone (in scale) and the mechanics of its removal.

I was unable to find any radiographic reproduction of a common stone, so as a matter of interest and perhaps of information to others, Mr. Shrope, the radiographer of the King's County Hospital, made an x-ray of the stone directly superimposed on the plate of which this is a print.

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### LUETIC PARALYSIS OF RIGHT VOCAL CORD.\*

DR. GEORGE E. DAVIS, New York City.

The patient, age 20 years, consulted me January 5, on account of a sore throat, which began rather suddenly about three days previously. He said it was difficult and painful for him to speak or swallow. His voice was husky, and enunciation indistinct.

On inspecting the mouth and pharynx the first thing that attracted my attention was that the soft palate was drawn up and to the left so that the uvula was displaced to the left about mid-

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\*Read before the New York Academy of Medicine, Section on Laryngology and Rhinology, January 24, 1917.