the law to protect the weak, vicious, inferior and criminal types of humanity against the drug habit by seeing to it that there is none obtainable except through those legally authorized to deal in these restricted dangerous commodities.

3. We must depend upon pharmacists, who are the legally authorized dispensers, to see that no member of their organized profession betrays a trust which is a breach of ethics, if not a violation of law, by permitting a particle of any opiate to go out of his place of business except upon the prescription of a legally licensed physician and within the bounds of accepted rules and standards for dosage.

4. Then the doctors can do the rest by refusing to prescribe or administer opiates to drug addicts and by protecting the innocent or the ignorant against the habit, and by teaching their patients the dangers of taking repeatedly or habitually any of the sedative or anodyne drugs, including the opiates.

An earnest campaign against the drug traffic, and for law enforcement, co-operated in by officers of the law, druggists and doctors, and backed by a wholesome public sentiment of the community, would sweep the thing out of Alabama, and drug addiction could be no more.

REPORT OF A CASE OF HUGE DILATATION OF THE ESOPHAGUS*

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Cases of diffuse dilatation of the esophagus are not uncommon; but the case which we are about to report had a number of unusual features making it of considerable interest.

*Read at Meeting of the American Gastroenterological Association, Atlantic City, June 1, 1917.

CASE REPORT

B. F. C., age 40 years, a brakeman by occupation, was referred to us by Dr. Z. K. Wiley on December 6, 1916, and was admitted to the Mercy Hospital. The patient complained of inability to retain food and gradually increasing weakness and eructations. His family history was negative; there is but little of interest in his personal history. He fell from a train in 1907 and fractured two ribs on the left side. He had been suffering for many years with headaches and constipation.

His appetite has been good. The bowels are constipated. There has been neither hematemesis nor melena. After the ingestion of a meal the patient has had to make repeated swallowing efforts in order to prevent the food's being regurgitated. Soon after eating eructations are produced, and the food is regurgitated, a mouthful at a time, lasting from two to four hours, and sometimes as long as eight or ten hours. He finds that he can swallow solids as well as liquids, but more discomfort is produced by solid food. Occasionally vomiting of food eaten the day before occurs. The patient suffers at times with epigastric pain, radiating to the back between the shoulder blades, which he ascribes to gas. However, he is usually free from pain. Food taken can be regurgitated at will. He feels full and bloated after eating, but this condition is relieved by eructations or by vomiting. Nausea is frequently present and the patient complains of a bad taste in the mouth.

The patient had been a brakeman for nineteen years and has been drinking three or four cups of coffee a day. He has not been addicted to the use of tea, beer, nor whiskey. He smokes three cigars a day.

Present Illness.—The patient was perfectly well and had no digestive disturbance until his twenty-second year. At that time, after having partaken of a meal consisting of ham and eggs, indigestion set in, accompanied by pain in the abdomen and vomiting. The patient dates the onset of his trouble to that attack. Since then he has been regurgitating food and has had indigestion more or less most of the time. His condition has gradually become aggravated, although he has periods of complete relief from symptoms lasting a month or two at a time. He has gradually been growing weaker. When the indigestion is especially severe the skin becomes dry and cracked. The patient claims that he can eat with ease two-thirds of a loaf of bread, two eggs, two glasses of water and two cups of coffee; but in several hours regurgitation occurs. The appetite is good and is rarely satiated. The patient has lost about forty pounds in weight in the last six months.

On physical examination the patient presents a pallid complexion and is much emaciated. His cervical glands are enlarged. The lungs are apparently normal; vocal fremitus is, however, somewhat increased on the right side and the percussion note appears to be of a higher pitch than that over the left side. The apex beat of the heart is found in the epigastrium just beneath the ensiform cartilage; the heart is apparently displaced downward and to the right.

I.
Antero-posterior view showing esophageal dilatation and bismuth in colon from previous day. Immediate plate.

III.
Lateral view chest, showing large dilated esophagus below and bismuth in esophagus above. Immediately after bismuth.

II.
Antero-posterior view showing esophageal dilatation; bismuth residue in stomach; gastropnoia. Immediate plate.

IV.
Antero-posterior view, showing small bismuth residue in esophagus. Shot in stomach attached to string and swallowed.

On examination of the abdomen no masses are observed, the veins are enlarged and plainly visible; the liver and spleen are not enlarged and there are no areas of tenderness. The external abdominal rings are enlarged and small hernias are present on both sides.

The urine presents neither sugar nor albumin. It contains a few pus cells, oxalate of lime crystals and a few hyaline casts. The blood examination reveals a total red count of 3,540,000; white count, 7,300; and hemoglobin 65%. The differential count is as follows:

Polymorphonuclears, 70%.

Small mononuclears, 23%.

Large mononuclears, 6%.

Eosinophiles, 1%.

The Wassermann reaction is negative.

The stool is soft, brown, alkaline in reaction, contains traces of occult blood and triple phosphate crystals. Neither parasites nor ova are present.

The contents of the esophagus were removed one hour after an Ewald test breakfast; 530 c. c. of contents were obtained, white in color, of a total acidity of 25 and with an absence of free HCl, with mucus and lactic acid in abundance and also containing occult blood. Microscopically the contents contain starch granules, yeast cells and Oppler-Boas bacilli. Twelve hours after a retention meal 650 c. c. of contents were removed presenting the same characteristics as have been already described. The capacity of the esophageal dilatation was found to be 1,700 c. c.

An X-ray examination revealed an enormous dilatation of the esophagus with marked retention. This retention was most marked for 24 hours, and to a slight degree even for 48 hours. The barium could be seen trickling through an exceedingly narrow orifice. The retention was so great that it was difficult to obtain any satisfactory plates of the stomach itself, for the small quantity of barium which would trickle into the stomach would pass out almost as quickly as it entered. Small quantities of barium were, however, observed in some plates far down in the abdomen pointing to a gastropnoia.

A diagnosis of diffuse dilatation of the esophagus was reached and attempts were made to pass through the strictured area. At first an Einhorn duodenal tube was introduced, but failed to pass the cardia. The patient was then allowed to swallow a thread, which gradually found its way through the cardia into the stomach; gradual dilatation being contemplated, when the string had passed sufficiently far to be used as a guide for the passage of perforated olive bougies. After frequent attempts it was observed that the thread would not pass through the stomach, notwithstanding the fact that it was left in situ at various periods for from 24 to 48 hours. This was due to a marked pylorospasm, as was subsequently observed at operation. The patient was exceedingly weak and so emaciated that further delay was no longer considered safe, and it was deemed best to open the abdomen and dilate the cardia from below.

On December 15, a gastrotomy was done under

rectal ether anesthesia. The stomach was opened on its anterior surface near the cardia and the silk thread which had been previously swallowed was delivered. With a little effort the index finger of the operator was forced through the cardia into the esophagus and bougies of various sizes, including the largest, were passed. Inasmuch as there was but little difficulty in finally passing the largest bougies and on account of the danger of infection due to the great amount of manipulation in the stomach, it was deemed advisable to close the stomach. For a few days the patient was able to swallow and was free from attacks of vomiting, but was soon again unable to retain any food. It was, therefore, deemed advisable to perform a gastrotomy, which was done on December 23 under local anesthesia. The patient was fed at once with small quantities of fluids through the gastrotomy opening. He was exceedingly weak, however, and did not rally, and died on December 26.

Autopsy Findings.—The thorax and abdomen were opened in the usual manner. The left thorax was normal; when the right lung was pushed aside the enormously-dilated esophagus was revealed. The esophageal dilatation was fusiform in shape, the smaller portion of which extended as high up in the neck as the cricoid cartilage. The esophageal sack held as much as 1,750 c. c. of water. The stomach was about normal in size, with a capacity of 750 c. c. The other abdominal organs were normal. This case presents a number of rather interesting features; the most important of which are: first, the very extensive dilatation of the esophagus; and, second, the inability of the silk thread to pass through the pylorus.

While cases of idiopathic dilatation of the esophagus due to cardiaspasm are not infrequent, it is unusual to observe cases presenting dilatations so extensive as the one reported, the capacity of the esophagus being 1,750 c. c., over twice as great as that of the stomach. It is unusual, too, no matter how marked a stricture might be, to observe that a silk thread will not seek its way through the stomach into the bowel, it being well known that a thread will find its way through any passage that water will. In our case this difficulty was demonstrated to be due to pylorospasm. It is quite probable that if the patient had been examined at a less advanced stage of his affection it might have passed without difficulty. Inasmuch as the passage of the thread is the most important feature preliminary to proper treatment of this condition, the usual treatment—that is, dilatation by the passage of perforated olive bougies over the thread drawn taut, could not be practiced.

The question as to the etiology of id-

V.

Antero-posterior view, showing esophageal dilatation, cardia and stomach residue. Stomach ptosed in left iliac fossa.

VII.

Dilated esophagus and stomach inflated with fluid after removal at autopsy.

VI.

Diagram esophagus and stomach as shown at autopsy.

iopathic dilatation or the esophagus has been a matter of some discussion, especially regarding the question as to whether the cardiaspasm precedes the dilatation or follows it. Both Strumpel and Mikulicz recognized the importance of cardiaspasm in the development of diffuse dilatation of the esophagus, yet the credit is due Meltzer, who first pointed out the important relation between the two conditions and demonstrated clearly that the dilatation is really a stagnation ecstasie due to the contracted cardia produced by a disturbance of innervation. On the other hand, Rosenheim maintains that the cardiaspasm is secondary to the dilatation. Strauss believes that both the spasm and dilatation occur simultaneously, both due to a vagus paralysis. On the other hand, Fleiner looks upon the

dilatation as congenital, though it may remain latent for years. Myer points out that this affection is frequently observed in enteroptotic individuals in whom it is not unusual to observe other spastic conditions. There is a general consensus of opinion, however, that cardiospasm is really the primary state and that the dilatation is the result of this spasm, for, by means of the fluoroscope, the increasing dilatation has been demonstrated as a result of the spasm. We are firmly convinced, too, that the cardiospasm is the primary condition, and that dilatation is a subsequent manifestation. This case which we have just reported presents another illustration of how a disturbance of innervation may finally lead to organic changes.

AUTHORS' ABSTRACTS

Medicine

Cultivation Experiments with the Blood and Spinal Fluid of Pellagrins. Edward Francis. United States Public Health Service, Hygienic Laboratory, Bulletin No. 106, January, 1917.

Anaerobic cultivation, somewhat after the method described by Noguchi for growing spirochaetæ, was carried out on the blood and spinal fluid of pellagrins.

Blood and spinal fluid were cultured from each of 17 colored pellagrins at the State Insane Asylum, Milledgeville, Ga., 7 of which proved fatal between 6 and 37 days after the materials were obtained from them. In addition, blood was cultured from 4 mild cases at the U. S. Marine Hospital, Savannah, Ga.

Each inoculated culture tube contained (a) fresh rabbit kidney; (b) either ascitic fluid or a mixture of 1 part ascitic fluid and 2 parts meat-infusion agar (40.5), which latter in some cases contained 2% of glucose, (c) either fresh spinal fluid drawn by lumbar puncture or fresh blood drawn from the median basilic vein (defibrinated or citrated), and (d) either a 1-inch column of sterile paraffin oil or no oil.

All culture tubes were incubated without the use of special anaerobic apparatus at 37° C. for two or three weeks, at the end of which time examinations were made with the dark-field microscope.

The results of the examination of the cultures were negative; the cultures either remained sterile or an occasional tube showed a growth which was evidently a contamination.

Lumps in the Neck, with Special Reference to Tuberculous Cervical Adenitis. Jno. B. Hawes, Boston, Mass. Interstate Medical Journal, Vol. XXIV, No. 3, March, 1917, p. 259.

Lumps in the neck may be due to enlarged glands caused by—

1. Chronic or subacute inflammatory process.
2. Syphilis.
3. Carcinoma.
4. Sarcoma, malignant lymphoma or Hodgkin's disease.
5. Leukemia.
6. Tuberculosis.

Among the causes of the first group may be carious teeth, diseased tonsils or adenoids, pediculi capitis, and running ears. They are apt to be associated with acute infectious conditions. Treatment is to remove the cause.

The diagnosis of enlarged glands due to syphilis depends upon the history of infection and signs of syphilis elsewhere. The Wassermann test may or may not be positive. Ulcers due to syphilis do not respond to ordinary methods of treatment. The treatment consists naturally of anti-syphilitic measures.

Enlarged glands due to carcinoma are usually of metastatic origin. Diagnosis should be confirmed by excision of the gland and by pathological examination. In most instances treatment is of little or no avail.

Glands due to sarcoma or malignant lymphoma or Hodgkin's disease are sometimes impossible to diagnose at first. In case of doubt the gland should be excised. Radium and X-ray treatment may be of great help and may prolong life for years.

In Leukemia a blood examination will usually give the correct diagnosis at once. Radium and X-ray treatment may help in the majority of cases. Treatment consists in making the patient as comfortable as possible.

Tuberculosis.—Enlarged gland due to this cause are so common that it is better to consider all such processes tuberculous until the contrary is proved. Such glands may be of any shape, size or consistency. They may come on slowly or rapidly. They may or may not cause symptoms local or constitutional. I make it an arbitrary rule that whenever such glands have lasted for more than three months in the absence of an obvious cause, they are probably tuberculous by that time and are to be treated as such. In cases of doubt I have a gland excised and examined. Treatment consists, first, in removing all sources of infection. Second, general hygienic measures. The amount depends upon the individual case. Heliotherapy or sunlight treatment is of the greatest benefit in all cases. Surgical procedures may or may not be necessary, depending upon (1) the size of the glands and whether they are easily amenable to removal by operation; (2) whether the patient's condition is such as to warrant an operation; (3) whether the standard of surgical skill available to the individual patient is sufficiently high. Tuberculin may be of great help in certain instances. In many cases it does a certain amount of good and in no case should it do harm. All four methods of treatment should be used.

(Continued on page 733)