to fixation. In this position it was impossible to use the stereoscope; in other positions he could see the two images at once (L. and F. for instance), but could not unite them, the images were homonymous, the right always higher. He also apparently fixed binocularly with his head nearly in the normal position when prisms amounting together to 20° – 25° were placed before the eyes, base down L., base up R. — V., R. or L., $\frac{1}{2}$. Fundus normal in both eyes.

FIG. 1.

On June 10th further attempts were made to obtain stereoscopic vision without avail. L. and F. could be brought to a level with vertical prisms amounting to 18° , but not united. V., under homatropine, R. or L. with $+.75$, $\frac{1}{2}$ +.

July 14th, with cocaine, the superior rectus tendon of the left eye was partially divided, but the boy became very unruly and the operation could not be completed. Although I thought a

fairly wide division had been made there was no perceptible effect in the position of the eye.

August 12th, another attempt at division of the same tendon was made, with cocaine, the boy being unwilling to take ether, and assuring me that he would be quiet. This time he became unruly still earlier, and the operation was again abandoned.

October 22d, the boy's condition was the same as in June. Under ether, the left superior rectus tendon, which was large and broad, was fully divided.

FIG. 2.

move downward a little to fix, and *vice versa*. He cannot unite in the stereoscope.

December 9th, 1888. He has grown much during the past year. His figure is now almost normal, but the right shoulder is still slightly lower than the left, and the head is very slightly tipped. (Fig. 2.) He has never had double vision or asthenopia. The left eye turns as far down as the right, not quite so far up,

as far laterally. V., R. with $+.50$ cyl. $\frac{1}{2}$; L. with $+.50$ $\frac{1}{2}$. When he fixes in the median line, in or a little below the horizontal plane, on covering the right eye it appears to turn upward a very little, and when the left eye is afterward covered in turn, to turn downward again to fix; if the left eye is covered first, the right does not appear to change. Double images of a flame at 14' are not perceived even with the help of red glass and prisms. In the stereoscope L. and F. are united with difficulty.

It would seem *prima facie* an almost incredible supposition, that with never a sign of double vision or asthenopia, a faulty position of the eyes should cause so pronounced and persistent a distortion as in this case, particularly when the distortion did not enable the individual to obtain binocular fixation for the vastly greater part of the time. Yet the fact that the distortion did to all appearance render binocular fixation possible in one position of the object led me, in the absence of other discoverable cause, to think this supposition probable. It is within the bounds of possibility, also, that in earlier life the twisted posture gave binocular fixation over a wider area, and therefore for a larger part of the time, and that the posture once become habitual occasional binocular fixation only was needed to maintain it in permanency. The rapid improvement that took place after tenotomy appears to sufficiently confirm the correctness of the theory.

It has been suggested to me that the vigorous growth of the boy during the year after the tenotomy was one, perhaps, the most active factor in the change that occurred. I should be far from denying that the growth had been a helpful influence. To suppose it more than a subsidiary one, however, is to neglect the consideration that during the four and a half months that elapsed between the time the boy was first seen and the tenotomy there was no discoverable improvement, while during the first month after tenotomy the improvement was very marked.

The objection might also be made that it was not the actual changed relation of the eyes, but the moral effect of the operation that produced the desired result. But certainly the incomplete operations under cocaine, which did not alter the position of the eyes, should have had even greater moral effect than the operation under ether, and yet they left the condition absolutely unchanged.

A CASE OF HÆMORRHAGIC PANCREATITIS.

REPORTED BY WM. SIDNEY THAYER, M.D.

Formerly House-Officer at the Massachusetts General Hospital.

SINCE the appearance last winter, of Dr. R. H. Fitz's paper on Acute Pancreatitis, no further cases of this nature have, I believe, been reported. The real and practical importance of this subject, so strongly set forth by that most valuable work, has seemed to me to make this case well worth recording.

The patient was a man sixty years of age, by trade, a designer of rubber boots. His family history was excellent. He had suffered from no serious illness but had always been unusually strong and healthy. Though not very tall, he was of large frame and rather fat, weighing, three months before his death, two hundred pounds. His habits in early life had been good, but in his later years he had indulged moderately in liquor, occasionally — "once every

month or two," according to his friends — to excess. He had never been subject to digestive troubles.

Thirteen months before his death he was seized suddenly one day, with a very severe pain in the epigastrium darting through to the back. The pain was very sharp and continuous, lasting about sixteen hours, and ceasing gradually. Four months later he had another similar attack, and this time his wife noticed that toward the end of the seizure and on the following day, he was jaundiced. For six or seven months after this there was no recurrence of the pain, and the patient considered himself in the best of health.

About three months before his death, however, he began to have similar attacks of pain recurring at intervals of one to two weeks. These attacks were all of a like character; very sudden in onset — "He just knew when they were coming:" — lasting usually twelve to eighteen hours, sometimes a shorter time; the pain disappearing rather gradually. Most of the attacks were attended toward the latter part, and followed on the next day, by jaundice. The pain was always in the epigastrium darting through to the back, in the left hypochondrium, and "at the extremity of the ribs on the left side" — The friends are sure that the attacks bore no relation in time or otherwise, to the taking of food. The patient, however, thinking that it might relieve him, used, at first, to force himself to vomit, but in the later attacks vomited involuntarily. The vomitus consisted chiefly of food — no hæmatemesis.

During the last month of his life, the patient complained constantly of a "choking feeling" in his throat, "as if something were sticking there and would neither go up nor down." At times, also, he had a similar feeling behind the lower part of the sternum, as if food had "stopped just about entering the stomach." During the last month the attacks of pain recurred every two or three days, and the patient, believing that they were in some way connected with his food, lived for nearly three weeks on a liquid diet. He was unable to attend to his work properly, and lost much strength, and twenty-five to thirty pounds in weight.

On June 13, 1889, he came to the out-patient department of the Massachusetts General Hospital for advice. He went back to work but the attacks continued, and on June 23d, he came to Boston. On this date, for the first time in three weeks, he ate a hearty dinner of beefsteak and potatoes.

On the morning of June 24th, at 9 A. M., he had a severe attack of pain, apparently similar to those from which he had previously suffered, and at about 3 P. M., he was admitted to the Massachusetts General Hospital, service of Dr. W. L. Richardson. At this time he was in great distress, groaning, and tossing about with pain. He placed his hand, in describing the seat of the pain, in the left hypochondrium and epigastrium, just to the left of the middle line.

Physical examination showed a man of large frame and well-nourished; marked pallor; tongue dry; pulse regular and of good strength, 120; temperature 98.8°; respiration 28; heart and lungs negative; abdomen rather full but not distended. The patient did not complain much of tenderness, though deep pressure in the left hypochondrium caused him to flinch. Pressure on the lower left ribs did not seem to increase pain.

The patient suffered considerably during the afternoon, and in the evening was given morph. sulph. gr.

℥ hypodermically, and an hour later a suppository of morphia gr. ½, after which he fell asleep, sleeping most of the night.

The urine obtained shortly after entrance was rather high-colored, acid; specific gravity 1024; no albumen or sugar; indoxyl increased; sediment slight, microscopical examination showing an occasional leucocyte and bladder cell, no casts. The Rosenbach color test gave a positive result. The patient was given a liquid diet.

On the morning of June 25th, the patient did not complain of pain, but seemed rather dull and stupid, and said he felt sick. He vomited his milk once. Temperature, 98.4°; pulse, 100; respiration, 26. A slight yellowish tinge was noticed in the skin and conjunctival, and soapsuds enemata were given without result. Shortly after 3 P. M., he suddenly sat up and threw himself across the bed. When seen, about ten minutes later, he was tossing about the bed in great distress, though he seemed unable to say why. His speech was thick and indistinct; when asked if in pain, his answer could not be understood. There was marked cyanosis; skin hot, moist; pulse not to be counted at the wrist, very feeble; by auscultation, heart's action weak but regular, 160; respiration very shallow and rapid, 60-70; temperature, taken by rectum about an hour later, 105°; no orthopnea; tendency to lie on the left side. Fine moist râles were heard in the left axilla, and a general fulness of the abdomen was noted. Stimulants were administered by the mouth, and when in a short time the patient became unable to swallow, hypodermically and by enemata. In an hour the patient became unconscious, and at 7.10 P. M., died.

An autopsy was made by Dr. R. H. Fitz, thirteen hours after death. The following extracts are taken from the record:

"Heart: right side distended with liquid and clotted blood, the latter differentiated; left side comparatively empty. . . .

"The duodenum contained a faceted gall stone about the size of a hazel nut.

"Pancreas: in length, 8 in.; longitudinal diameter of head, 1½ in.; longitudinal diameter of tail, 1¼ in.; transverse diameter of head, 1½ in.; transverse diameter of tail, 1 in. Consistency soft. Surrounding fat tissue moderately infiltrated with blood, which toward the tip and along the posterior surface was in spots and patches dried, of a reddish-brown color. Posterior surface of the pancreas adherent by easily separated adhesion to the posterior wall of the lesser omental cavity. Fat tissue in front of pancreas and at root of mesentery showed numerous opaque, white superficial spots, sharply defined. The pancreatic duct readily admitted a director. On longitudinal section of the gland, the color of the head was an opaque reddish gray; of the tail a greyish pink. Spots and streaks of an opaque white and others of a reddish-brown color were seen, especially at the tip. The tubules in general were indistinctly defined, but in the head, and more rarely in the tail, were apparent patches of thickened interstitial tissue. The splenic and portal veins were free from thrombi. . . .

"Gall bladder, thickened, firmly contracted, containing more than a hundred calculi, for the most part faceted and varying in size from that of a hazel nut to that of a split pea. One large, white calculus was oval, rounded and as large as the end of the middle finger

The gall bladder also contained a small quantity of viscid, opaque, yellow fluid. Mucous membrane thickened and rough.

"Common duct dilated to nearly the size of the little finger. Cystic and hepatic ducts also moderately dilated."

With regard to symptomatology few conclusions can be drawn from this case, owing to the close association of the pancreatitis, with the frequent attacks of probable biliary colic. But whatever the nature of these attacks, it is of interest that the pain was always in the region of the pancreas.

The possibility that the patient may have had previous attacks of pancreatic inflammation, is certainly suggested by the patches of apparently thickened interstitial tissue found on autopsy.

The occurrence of disseminated fat necrosis is interesting. This condition was found in more than one-third of the cases of hæmorrhagic pancreatitis tabulated by Dr. Fitz.

The case seems to me to be of peculiar interest in view of the possible etiological relation between the cholelithiasis and the pancreatitis. The probable frequent passage of gall stones and the resulting dilatation of the ducts would surely seem to afford an excellent opportunity for the entrance of any infectious agent from the intestinal canal.

While the evidence obtained during the life of the patient was not sufficient to justify a positive diagnosis, acute pancreatitis was throughout considered to be the probable condition.

REPORT ON PROGRESS IN THERAPEUTICS.¹

BY FRANCIS H. WILLIAMS, M.D.

INCIDENTAL EFFECTS OF ANTIPYRIN.¹⁶

Few of the modern antipyretics have found such a wide application as antipyrin, and scarcely any has such unpleasant or deleterious accompaniments; moreover, the cases in which its use causes dangerous symptoms are increasing in number.

Dr. Drasche has reported the results of his own observations on more than three hundred cases, and has collected the reports of its incidental effects from the current literature. It has even been found to excite fever repeatedly in a case of rheumatism in a woman of fifty-two. Not infrequently the administration of antipyrin was followed by nausea and even vomiting, more often in women than in men; this action was not a local one, as it occurred in cases in which the drug was given by the rectum. In two children moderate doses were followed by hæmatemesis, convulsions and death. The eruption caused by antipyrin is of special interest; it occurs in about ten per cent. of the cases, chiefly in typhoid and phthisis, more often after continued use, though in some cases after a brief period and in minimum doses. It has, in exceptional cases, appeared after an interval of only five minutes and half an hour. As a rule, the exanthematous eruption remains from one to three days, but may be present for a week or more; and it is quite independent of the amount given. The eruption is in the beginning chiefly local, but may spread over the whole body. It is most frequently erythematous in character, but may resemble measles, scarlet fever and urti-

caria, and may occur even in different forms in the same individual at various times.

A rapid fall of temperature from antipyrin is not infrequently accompanied by profuse sweating, which may continue for several hours; this, on readministration of the drug, may or may not return to a greater or less extent. In phthisis, after comparatively small doses, there may follow profuse and debilitating sweating.

In typhoid pneumonia there may also be marked lowering of the blood pressure. The temperature may sink far below normal, and, on the other hand, may rise to even a higher point than before; there may be not only profuse perspiration but even rigors, and in some instances this may culminate in collapse and cyanosis. It may cause convulsions or narcotic symptoms, such as sleepiness, hebetude and great depression. Severe coryza with abundant discharge of mucus, difficult breathing with frequent cough and expectoration, and profuse sweating may also be caused by it.

It is generally believed that antipyrin exerts no marked action on the kidneys, but slight degrees of retention, as well as incontinence, have been noticed, though quite rarely. The urine is somewhat diminished in quantity, and its specific gravity increased.

Antipyrin is certainly a drug which may excite disquieting and threatening symptoms as well as exert a toxic action, though their occurrence is exceptional. In general it may be said that weak, debilitated subjects, those with a weak heart, and children, are most apt to show susceptibility to the drug. In such patients small doses should be used at first, especially in typhoid fever and phthisis.

ANTIPYRIN AS AN ANALGESIC.

This drug has been used subcutaneously in a solution containing thirty to fifty per cent. of antipyrin. Gunther¹⁶ found that a deep injection made at the seat of a fresh fracture enabled him to apply the first apparatus without the slightest muscular contraction. This use of antipyrin might be applied to various painful conditions. The effect appears within a minute, and lasts about six hours.

Wolff¹⁷ attributes to antipyrin a local action over pain equal to, if not surpassing, that of morphine. In acute rheumatism, an injection, in the neighborhood of the affected joint, relieved the pain in three to five minutes, so that the patient could raise an arm, without pain, that was previously helpless. The chest pains of phthisis he saw relieved in five minutes, and permanently; and the stabbing pains of pleurisy, etc., so assuaged in a few minutes that a satisfactory examination, previously interfered with by the shallow breathing, was made possible. In muscular rheumatism, in a large series of cases, the pain disappeared after a few minutes, either not to return at all or in a much more moderate degree. In neuralgias of superficial nerves and in asthmatic attacks, the results were extremely satisfactory. According to Wolff its action follows within five minutes, and persists ten to twelve hours, if then the pain returns it is much modified.

The solution is made of fifty per cent. strength, in boiled distilled water and filtered several times. A syringeful of eight grains is given, but oftentimes one-half the quantity is sufficient. No bad effects from

¹ Concluded from page 483 of the Journal.

¹⁶ Wiener klinische Wochenschrift, October 11, 18, 1888.

¹⁶ Deutsch Med. Wochenschrift May, 1888.

¹⁷ Therapeutische Monatshefte, 1886, p. 279.