colon, as has been frequently done, without detriment to the economy in the supposed necessary presence of bile in the small intestine. This possibility was abundantly proved by the elaborate and carefully conducted experiments by Robson¹⁸ on a case of biliary fistula, which he epitomized in the following conclusions:

1. The bile is probably chiefly excrementitious, and like the urine, is constantly being formed and cast out.

2. Though the bile probably assists in the absorption of fats, its presence in the intestine is not necessary for the digestion of such an amount of fat as is capable of supporting life and keeping up nutrition.

3. Increase in body-weight and good health are quite compatible with the entire absence of bile from the intestines.

4. The antiseptic properties of the bile are unimportant. 5. Whatever little antiseptic quality bile may have is probably derived from its admixture with the gall-bladder fluid.

6. The supposed stimulating effect of the bile on the intestinal walls is not necessary for a regular action of the bowels.

COLOCHOLECYSTOSTOMY.

I beg leave to briefly report the following case of colocholecystostomy for chronic catarrhal cholangitis with gall-stones:

B. J. G., male, aged 27, had a severe attack of biliary colic attended with tenderness and jaundice in February, 1897. He had had several light attacks of hepatic colic some weeks before, and he had been in Johns Hopkins Hospital, Baltimore, awaiting operation, but improved, and so it was deferred. He was operated on after the severe attack in 1897, by Dr. J. F. W. Ross, of Toronto. A number of stones were removed, a fistula made and a drainage-tube kept in for two weeks. The fistula remained open until June, 1897, when Dr. Ross closed it by suture, and the patient, who had been in bed the whole of the four months, was up in a week. In November, 1897, he again had a number of attacks of colic and jaundice, which kept up intermittently until March, 1898, when Dr. Louis McLane Tiffany, of Baltimore, opened the gall-bladder. As he found no stones, he closed by immediate suture, fixed it to the abdominal wall, and closed the incision throughout.

In June of the same year, while still in the hospital, the patient was again seized with attacks of colic and transient jaundice, which, in the absence of Dr. Tiffany, induced his assistant, Dr. I. R. Trimble, to again open the gall-bladder for exploration. He wrote me that he found no stones, but thought he had succeeded in passing a rubber catheter through the cystic duct and thence into the duodenum. The gall-bladder was sutured and attached to the abdominal incision, which was closed by buried and superficial silkworm gut sutures.

On July 3, he received a blow on the head, which resulted in a fracture of the skull, which was elevated by Dr. Robert Pillow, of Columbia, Tenn.

In August, 1899, fourteen months after the third gall-bladder operation the pain and colic returned and was rather frequent and more severe than ever before. On October 1, he had an attack that lasted four days, and could obtain no relief. He came to see me in Nashville and, while there, had one of the most severe attacks of biliary colic I have ever seen. I gave him 2½ gr. of morphin, hypodermically, in less than three hours without any appreciable effect on the pain. He was not accustomed to taking morphin, and after the operation 1/8 gr. had a very satisfactory and complete effect.

On Oct. 12, 1899, in the presence of jaundice which had existed fitfully for two months, I made an exploratory operation through the old scar parallel with the ribs. As the gall-bladder was attached to the parietes, it was opened, and a black, tarry fluid was found therein and one large gall-stone, perfectly black and somewhat larger than a cherry-stone, together with some smaller crystal-like stones. An effort was

made to catheterize the ducts, which it was reported had been done before without success. The gall-bladder was irrigated and temporarily packed with gauze. It was then dissected from the parietes below and a careful palpation of the ducts made, but no other stones could be detected. The adhesions were very considerable as the result of so many previous operations and such long-continued inflammatory trouble, and the gall-bladder was much contracted. I did not wish to content myself simply with the removal of the two small stones, nor yet did I desire to close it up again or give him another biliary fistula, both of which had failed to give permanent relief. Kelly, Senn and Murphy had all advised a cholecystectomy, but after I found no calculous obstruction to account for the recent colic and existing jaundice, I concluded that it must be a chronic catarrhal cholangitis with intermittent inflammatory obstruction. I thereupon deemed it unwise to do a cholecystectomy, and decided to make a cholecystenterostomy. The duodenum, however, was so matted with adhesions and the gall-bladder was contracted to such an extent that I did not think I could make the anastomosis with safety. I, therefore, utilized the hepatic flexure and made a Murphy button anastomosis with gauze drainage. There was no untoward symptom. A little bile came out after the removal of the gauze, on the third day, but none thereafter, and the drainage tract closed quickly. The jaundice faded, urine cleared up and he had two normal bowel movements a day, whereas, he had previously been obliged to take purgatives daily. He went home at the end of two weeks, with a clear complexion and a gain in weight; has had no trouble since, but the button has not passed.

McGuire reports a button retained over a year after cholecystenterostomy, but Treves has never known one to remain in the gall-bladder.

NOTE—I have had a communication from Dr. Ross since this paper was read, referring me to a report of the first operation performed by Dr. Ross, upon this patient; the specimens were illustrated in the *International Clinics* for October, 1897, Vol. iii, 7th Series. About 3000 gall-stones were removed which were denominated by Ross and also by Frerichs, "biliary gravel."

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312 North High Street.

A CASE OF PERFORATING GASTRIC ULCER.*

ALLEN JONES, M.D.

Adjunct Professor of Principles and Practice of Medicine, University of Buffalo.

BUFFALO, N. Y.

For the following case I am indebted to Dr. A. B. Beaver, of Ridgway, Pa., who kindly referred the patient to me Sept. 20, 1899.

The patient was a man, by nativity a Swede, aged 57 years, by occupation a tanner. He said that his father died at the age of 90 and his mother at the age of 45—cause unknown. He had two brothers and two sisters,

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all of whom were in good health. The man had been suffering for five years from recurring attacks of gastric pain and vomiting. After stopping work and abstaining from all but small quantities of predigested milk and other liquid foods for a few weeks, his vomiting ceased, and he rapidly gained strength and returned to work. This happened several times and each succeeding attack was more severe than the former until finally, before I saw him, he had not been at work for four months. Owing to circumstances which prevented me being in my office when the patient first called, Drs. Stockton and Woehert very kindly examined him for me. He complained of weakness, loss of flesh, poor appetite, pain in the epigastrium, eructations and vomiting. He was constipated most of the time, but occasionally had attacks of diarrhea. His skin was sodden; his urine amounted to 864 c.c. in 24 hours, and the urea to 16.41 grams; there was a trace of albumin, but no sugar and no indican; the acidity was normal and the microscopic examination negative. The thoracic organs were normal, though the pulse was weak and the capillary circulation poor.

The first examination of the stomach showed moderate gastric stasis but no marked stagnation. The total acidity was 56; the free hydrochloric acid registered .12 per cent.; no lactic acid was found. On October 5, I examined the stomach before breakfast and found a lot of the food eaten the night before—the odor of which was not offensive though the mass was somewhat yeasty. Free hydrochloric acid was present; lactic acid was absent; butyric and acetic acids were present; hemialbumoses and peptone were present in large quantities; rennet ferment was active; starches were not digested. Microscopically, a goodly number of large long bacilli and strings of cocci were found but no Oppler-Boas bacilli were discovered. Subsequent examinations revealed similar motor, chemical and microscopic conditions, and as there was never at any time epigastric tumor to be felt, a provisional diagnosis of benign stenosis was made. There was no history of hematemesis nor was any blood found in the gastric contents. Diet, gastric sedatives and local treatment proving of no avail, operation was advised. On October 19, Dr. Park made a median epigastric incision and found the lesser curvature and pylorus attached to the liver by recent adhesions which were separated and revealed a clean chronic perforating ulcer of the superior anterior surface, very near the pylorus. The perforation was large enough to admit a lead pencil and the chronic nature of the ulcer was apparent by the formation of a new epithelial surface over almost its entire depth and by the large amount of thickening in and about its margins. The pylorus was amply patulous. Pylorotomy was performed and the patient succumbed a few days later owing, doubtless, to the fact that he was seriously weakened and reduced before the operation and was much past middle age. Pyloric stenosis probably depended upon spasm resulting from the irritation of the ulcer.

436 Franklin Street.

DR. GEOFFROY, of Rome, has been administering a solution of resorcin in certain digestive disturbances, and a child in his charge died. The parents' sued him, and the medical expert summoned stated that resorcin is toxic and that an adult can not take over 2½ gm. To prove its harmlessness Geoffroy took large amounts for several days and died in consequence.

REVIEW OF THE PRESENT STATUS OF JONNESCO'S OPERATION.*

MARCEL HARTWIG, M.D.

BUFFALO, N. Y.

The olden writers considered it proper to commence an allocution with a *captatio benevolentiae* and so do I; with what success, remains to be seen. At all events I feel obliged to make an attempt to dissuade you from harsh criticisms because my paper will necessarily fall short of my own demands; what then can I expect from you? If there be any blame, your secretary must share it with me, as his request for a paper came on a very late day, and I promised against my better conviction. Furthermore, I have to say in explanation of my choice of title, that while it is certainly wise to call an operation by a name fully expressive of the procedure, it is not less our duty to acknowledge the meritorious work of our confrères who have promoted science. The highest reward we can bestow is due to those whose genius has given us a meritorious method for alleviating human suffering. It is therefore fitting that I should call this operation—neurectomy of the cervical sympathetic—by the introducer's name.

If we desire to obtain an understanding of the effects to be expected by resection of the cervical sympathetic we must recur to the physiology of this important nerve; and here, in delving into details, we find more discrepancies than we could expect from a perusal of the text-books. Preeminently we must not forget that all results of physiologic research in animals have to be transferred with caution, into the realm of human physiology. The location of the nerve is different according to the species; and late effects have been well-nigh neglected by physiologists. While the previous observations of accidental lesions have taught us some things, Jonnesco's labors have already shed considerably more light, and he and his followers will give us still more.

Presuming that the essentials are fresh in the minds of my hearers, let me recite some rarer observations. Bidder says that after cutting the trunk the salivary gland atrophies. Gad says that electric irritation of the upper end of the severed trunk, while it remains in connection with the head, produces general contraction of the blood-vessels of the head, except those on the mucous membrane of the cheeks, lips and gums, where redness appears. Seeligmueller says that traumatic paralysis was published eight times previous to 1876; but that only twice, redness and raised temperature of cheek and ear were reported, and twice only, flattening and reduction of the substance of the corresponding half of the face. Brown-Séquard saw, 18 months after section of both sympathetics on the neck of the guinea-pig, distinct atrophy of the brain; after one-sided section, atrophy of the brain of the same side only; whereas, Vulpian only once succeeded in seeing the same result. Wagner seems to have been the first man to find (1865) that hypotony of the eyeball follows the section of the ganglion supremum, while the myosis was well-known. Panas has shown though, that this hypotony does not last. While Hippel and Gruenhagen have shown that irritating the trigeminus within the skull produces glaucoma, Abadie says that this is due to the sympathetic fibers accompanying the trigeminus.

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