mal. Some difficulty in swallowing. Transient pain in left forearm.

July 16th. Temperature rose steadily to 105.6, pulse and respiration in keeping. Temperature uninfluenced by sponging.

July 17th. Patient irrational, temperature, 106.4; pulse, 140 to uncountable; respirations, 32 to 44, with no change until death at 11.23 on July 18th.

The locus, of beginning formation of the thrombus, was, without doubt, in the anomalous branch and its junction with the sinus proper, for there the striations of platelet composition were most abundant, and grew less so the farther it was examined away from this point, until the character of the thrombus was changed to the red type.

It is interesting to return now to Adami's statement of causes: 1, Slowing, or stagnation of blood; 2, eddying of blood stream; 4, bacteria and their products; and to Braun's "method of coming about . . . and an abscess forms between the sinus and the inner table. This results in an inflammation of the outer sinus wall, which in turn leads to the formation of a thrombus within the sinus."

Certainly there was, in this case, a condition of stagnation of blood in the branch, and eddying of the blood stream at the point of juncture with the sinus proper. Bacteria and their products were manifestly present in the perisinus abscess. Whether the sinus wall would have been resistant enough to withstand the action of the perisinus abscess, had stagnation and eddying been absent, is rather a nice question.

There seems to be a plethora of reasons for the occurrence of thrombosis in this case. It is possible that the thrombus may have begun in the injured emissary vein and extended to the branch and sinus. A glance at the chart shows that the temperature did not touch the normal until the 11th day. Sometimes a considerable change of temperature occurred in so short a time as one-half hour, a notable example of this being shown on July 7th, when there was a change in one-half hour from 102.6 to 105, without chill. It is my practice in cases of this sort to take temperatures every hour, or hour and a half, as otherwise considerable fluctuations occurring between the three-hour periods escape our knowledge. Possibly, the sizable localized meningitis in this case made the temperature less typical of sinus thrombosis. One is likely to consider chill as anti-

thetic to fever, but in this case there occurred that feature mentioned by Barnes, namely, febrile temperature during chill (see chart, July 13).

Smith's classification of total white count significance receives some support in this case, and in many cases in past years I have found a consideration of total count valuable. In many cases of sinus thrombosis the condition (thrombosis) supervenes in cases whose blood reaction has passed through its highest expression of leucocytosis and high polymorpho. percentage in the prolonged initial infection of the ear and mastoid; I am speaking now of chronic cases. The blood picture, the temperature and the peculiar change in the color of the patient were important considerations in the earlier stages of the illness, in the present case. Blood cultures were persistently negative, previous to the second operation and none was taken there after. Perhaps the explanation is that given by Smith, the complete blocking of the vessel by the thrombus.

This case emphasizes the importance of early operation.

REFERENCES.

- ¹ ADAMI: Principles of Pathology.
- ² BRAUN, A.: *Annals of O., R. and L.*, 1918.
- ³ PFINGSTEN, C. F.: *Jour. Mo. State Med. Assn.*, 1915.
- ⁴ GRAHAM, H. B.: *Jour. A. M. A.*, 1915.
- ⁵ BARNES, J. H.: *Southern Med. Jour.*
- ⁶ SMITH, J. M.: *Med. Record*, 1917.
- ⁷ KAUFMAN, A. S.: *N. Y. Med. Jour.*, 1917.
- ⁸ BRAUN, A.: *Annals of O., R. and L.*, 1914.
- ⁹ FRIESNER, I.: *Annals of O., R. and L.*, 1914.
- ¹⁰ BECK, J. C.: *Journal-Lancet*, 1915.
- ¹¹ HALL, G. G.: *Lancet-Clinic*, 1915.
- ¹² PHILLIPS, W. C.: *Diseases of the Ear, Nose and Throat*.
- ¹³ BOENNINGHAUS: *Phillips Diseases of the Ear, Nose and Throat*.

American Medical Biographies.

FITZ, REGINALD HEBER (1843-1913).*

REGINALD HEBER FITZ, clinician, teacher and contributor to the art and science of medicine, was born at Chelsea, Mass., May 5, 1843. His father, Albert Fitz, was a consul of the National Government; his mother was Eliza R. Nye—both being of unmixed English stock.

He received his preliminary education in the Chauncy Hall School, Boston, graduated A.B. at Harvard in 1864, and M.D. in 1868, and received an LL.D. in 1895. During his last year

* From the forthcoming "American Medical Biography" by Dr. Howard A. Kelly and Dr. Walter L. Burrage. Any important additions or corrections will be welcomed by the authors.

in medicine he was house surgeon in the Boston City Hospital. He then spent two years abroad with Rokitansky, Oppolzer, and Skoda in Vienna, and with Cornil in Paris; but the master spirit nearest akin to his own was Rudolph Virchow in Berlin, whose creation of a cellular pathology Fitz introduced to America, thus becoming our pioneer scientific pathologist. While in Berlin he wrote a paper on the changes in the cartilages of the bronchi in bronchiectasis in the fifty-first volume of Virchow's Archives.

On his return home in 1870 he settled down to practise in Boston, and at once entered upon his duties as a teacher, that extended through his whole life until his age retirement.

From 1870 to 1873 he was instructor in pathological anatomy in the Harvard Medical School, and from 1873 to 1878 he was assistant professor of pathology. In 1878 he was selected to succeed J. B. S. Jackson in the chair of pathological anatomy, the title being changed in 1879 to that of Shattuck Professor of Pathology. He retained this position until 1892, when he was succeeded by W. T. Councilman, and when he himself became Hersey Professor of the Theory and Practice of Physic in the Harvard Medical School. His pathological lectures, exponents of the new and quickening doctrine of the "cellular pathology," were thronged with interested students and were remarkable "in form and in substance, models of clear and precise exposition, admirably delivered in language, every faceted word of which seemed to have been chosen so that it and it alone could have filled the place." In 1887 he was made a visiting physician to the Massachusetts General Hospital.

Fitz entered upon his career as a teacher at the critical time when the faculty had just adopted a progressive course of instruction to cover a term of three full years, with examinations in writing, and with the resolution that no student should graduate without passing in every department. In the year in which he became an instructor, and before he became a member of the faculty, in 1871, the services of H. P. Bowditch were secured as assistant professor of physiology, and the faculty engaged to do its utmost to provide the latter with a laboratory. The same plans were entered upon in chemistry, and thus two definite policies were adopted of far-reaching significance for

the future of American scientific medicine,—namely, the teaching of the sciences upon which medicine depends by the laboratory method, and the employment as teachers of these sciences of men not harassed by the practice of medicine.

For twenty-eight years Fitz was on the important committee of courses of medical studies and for seventeen years guided its deliberations. His influence upon the development of scientific medicine in America in this way was, perhaps, more important than his two brilliant medical discoveries. That the Harvard School did much to inspire and help mould the Johns Hopkins course, I well know.

In taking up his general medical and consulting practice, Fitz had the rare advantage of a background of thorough training in pathology; in cultivating his diagnostic powers he had a habit of examining carefully the cases in the surgical ward before operation. Also he required that a clinical diagnosis should be made known before an autopsy.

In 1894 he was president of the American Medical Association, and in 1897 president of the Congress of American Physicians and Surgeons. In 1908 he retired from his chair as emeritus professor; he gave up his hospital position at the age limit of sixty-five years, and devoted himself for the remaining five years to private practice. On his sixty-fifth birthday his former pupils and assistants issued a volume in his honor entitled, "Medical Papers Dedicated to Reginald Fitz."

It was due to Fitz that Dr. Henry Francis Sears made his noble gift of the "Sears Pathological Laboratory" to the Harvard Medical School, the first laboratory in America used exclusively for the study and teaching of pathology.

Fitz's writings are sharp, critical and lucid. The titles to his papers number about thirty-eight. His best-known claims to fame are vested in two theses, "Appendicitis" and "Acute Pancreatitis."

The classical article on appendicitis was presented at the Association of American Physicians in 1886, with the title, "Perforating Inflammation of the Vermiform Appendix," and he gave here, for the first time, a clear picture of the clinical course and diagnostic signs of the disease, together with its pathologic changes, advocating a radical operation as the

immediate objective and the only rational means of saving life where there is not a prompt subsidence of threatening symptoms. His conclusions were firmly based upon some two hundred and fifty-seven cases of perforating ulcer, and two hundred and nine cases diagnosed as typhlitis and perityphlitis and perityphlitic abscess, in which the diagnosis was clinical only and not anatomical. The treatment recommended at the outset was opium, rest and liquid diet, and food in small quantities often repeated; but if general peritonitis seemed imminent at the end of twenty-four hours, the abdomen should be opened and the appendix removed.

In 1889 he analyzed a further series of seventy-two cases, occurring since 1886, and urged the interval operation. In this year he delivered another memorable address before the New York Pathological Society on "Acute Pancreatitis." He carefully distinguished the hemorrhagic, the suppurative and the gangrenous forms of acute pancreatitis. Since that time this disease, which was at first regarded as rare and curious, has come out into the light of day, and is now well known, and often diagnosed by all educated physicians and sometimes cured by operation. Here appears the earliest suggestion that fat necrosis is the result of a lesion of the pancreas, confirmed a year later by Langerhans.

In 1888 Fitz read a paper on "Intestinal Obstruction" before the first Congress of American Physicians and Surgeons, based on a critical study of two hundred and ninety-five selected cases; here again the conservative physician urges surgery.

In 1903 he again addressed the sixth Congress of American Physicians and Surgeons on pancreatic disease, and was elected president.

In 1875 he wrote on tubo-uterine or interstitial pregnancy (*American Journal Medical Science*, 1875). He wrote the article on diseases of the esophagus for the "Twentieth Century Practice," New York, 1896. The following year, in collaboration with H. C. Wood of Philadelphia, he published "Practice of Medicine."

Perhaps his last article is "Tests for Renal Function Based on the Secretive Excretory Activities of the Kidney" (*Boston Medical and Surgical Journal*, 1913, clxix, 384-386).

He prepared a large number of anatomical specimens to illustrate his lectures; these are

now in the Warren Museum, Harvard Medical School.

Dr. Fitz married Elizabeth Loring Clarke, daughter of Dr. Edward Hammond Clarke of Boston, and they had three children, a son, Reginald, following his father in the practice of medicine.

It seemed to be Fitz's mission to explore obscure medical territories and thus to enlarge the domain of his aggressive surgical confrères. As a lecturer he was always clear, comprehensive, logical and thorough. His diction was rapid and he always seemed to have more to say than could be crammed into an hour. The knife of logic in his hand, like that of steel in the hand of the surgeon, was guided solely by the intellect, as the unwary student often found. His critical faculty was very highly developed and fairness of mind was instinctive.

He died September 30, 1913, at Brookline, Massachusetts, after an operation for chronic gastric ulcer.

HOWARD A. KELLY, M.D.

BIBLIOGRAPHY.

- Boston Medical and Surgical Journal*, 1913, clxix, 815.
Canad. Med. and Surg. Jour., Toronto, 1913, iii, 1097.
Harvard Grad. Mag., Boston, 1913, xxii, No. 86.
 Keen, W. W., Councilman, W. T. (*et al.*): Reginald Heber Fitz, M.D., LL.D., 1843-1913.
 Memorial addresses delivered at the Harvard Medical School, Nov. 17, 1913, n. p. Privately printed. 86 pp. 8vo.
 Thayer, W. S.: In Memoriam. Reginald Heber Fitz. *Johns Hopkins Hosp. Bull.*, 1914, xxv, 87-89.

Book Reviews.

The Surgical Operations on President Cleveland in 1893. By W. W. KEEN, M.D. Philadelphia: George W. Jacobs & Co. 1917.

This book gives an account of the surgical operations performed upon President Cleveland by Dr. Joseph D. Bryant, assisted by the author, Dr. Keen. The operation was a triumph in both surgery and secrecy. Because of the grave financial situation which was threatening the nation at the time, it was essential to the nation's destiny that the knowledge of the President's critical condition should be kept from the newspapers and the public. For this end the operation was performed on the yacht *Oneida*.

The author gives a detailed account of the two operations performed on the President, who was suffering from cancer of the mouth. During the first operation, under nitrous oxide, the two left upper bicuspid teeth were extracted and necessary incisions were made in the roof of the mouth. Ether was then given to the patient and the entire left upper jaw, from the first bicuspid