

as many as ten or twelve different colonies present. On separating out into tubes the short rods seemed more curved and the threads appeared changed. The long slender rods that formed a thick network and a luxuriant growth on the mucous membrane died out in the tubes. The pyogenic germs appeared, as well as bacilli coli communi. Five colonies were lactic acid forming bacilli.

Tube cultures taken direct from the stomach wall: Tube No. 1, left in stomach juice; No. 2, milk (sterilized); No. 3, bouillon made from stomach of pigs; No. 4, same as No. 3 with starch added; No. 5, plain bouillon; No. 6, same as No. 5, starch added. All placed in incubator at 36 C. for twenty hours.

Reaction: All acid reaction except bouillon culture No. 5. Nos. 2 and 4 showed lactic acid. No. 4 was especially marked. The fluid was filtered and extracted with ether evaporated which gave a fair iodoform emulsion. No quantitative estimation made. December 6, ordered meal soup according to Boas method. December 7, withdrew and analyzed. Lactic acid, 85 per cent.

December 15, entered hospital of the Post-Graduate Medical School; oatmeal soup of Boas at night. December 16, withdrew stomach contents. Analyzed by Dr. Wisner showed lactic acid, 75 per cent. Operation ordered; stomach washed out and December 17 I performed laparotomy, assisted by Dr. Beck, and found a scirrhus carcinoma, two nodules at pylorus; one anterior and one posterior tumor, extending from the end of the lesser curvature. Gastro-enterostomy with Murphy button. Patient was attacked with violent hiccough and vomiting; stomach cleaned and fed per rectum; temperature remained normal. December 24, patient died. Post-mortem refused.

July 10, 1894, Mr. F. K., age 53, German, was referred to my office as a stomach case. Complained of pain over xiphoid appendix through to the back. Began to vomit about a year before; had to live on liquid food; dysphagia. Examination: Emaciated; could not pass stomach tube, attempted to pass the revolving sponge but met resistance at the cardiac opening; by using smaller sponges tried to explore the stricture. The cable and spiral within the sponge being more flexible than the ordinary sound there was less fear of puncture. Found a diverticulum containing remnants of undigested food; sputa negative; no albumen or sugar in urine but indican increased. Diagnosis: Carcinoma of the cardiac.

On July 23 gastrostomy was performed by Dr. Newman and myself. Introduced the gyromele through the stomach opening dilated, and passed a rubber tube through the stricture to the mouth. Examination of stomach contents, reaction neutral. July 24, made slides but no cultures were carried out. Slides showed many varieties of long and short rods, especially spirilla. After a gruel injection a slight Uffelman reaction, but not marked. July 28, patient died. No post-mortem allowed.

August 22, 1894, Mrs. S. G. S., widow, aged 65, referred, complaining of distress and burning sensation in stomach after eating. I was told that if carcinoma was thought to be present an operation would be allowed. It is often more difficult to exclude than include. The history, symptoms and general appearance favored carcinoma. Within one year loss of appetite and weight, progressive anemia, morning headache, constipation, belching after eating. Physical examination: Hair dry and brittle; skin dry; panniculus adiposus absent; color, pale, ashy hue. Teeth in good repair; tongue silver gray coat; depression of teeth. Nose and throat atrophic; rhino-pharyngitis; slight discharge from the vault. Lungs negative. Heart, faint mitral murmur. Liver palpable below costal arch. Abdomen retracted. Stomach gastropnoxis; transverse colon upper border below umbilical line; prolapse of right kidney, second degree.

August 23, withdrew contents after Ewald's test meal. Litmus +; no HCl; Uffelman's +; peptone weak; urine contained no albumen, blood or sugar 4,560,000; hemoglobin 55. August 28, four hours after meal, stomach was empty; weak acid reaction. August 30, after Boas' test meal, Uffelman's reaction very weak. No iodoform, showing practically no lactic acid. September 1, bacteriologic: Removal by the revolving sponge of mucus thick and tenacious. Slides show the mucus contains cells of the glands, columnar, round cells, leucocytes, also flat cells, a large number of colonies of rods and micrococci. Tube cultures showed many gas forming germs to be present.

A diagnosis made of gastritis chronica, with beginning atrophy and the complications named. Patient put under a vigorous treatment. Stomach walls cleaned with liquid soap, using the gyromele; oil of cloves and cinnamon ap-

plied. HCl exhibited in large repeated doses, as recommended by Ewald. A selected diet ordered, baths and massage.

September 9, recorded that the headache disappeared, the distress in stomach lessened, with but little belching of gas. September 18 recorded appetite much improved. October 29, disappearance of all symptoms. November 24, patient discharged, but requested to report in one month.

Examination of stomach contents after test meal showed HCl + weak; total acidity 35, Uffelman's; general condition improves; gain in weight and strength; no return of symptoms. December, patient considers herself cured, which can not be. No evidences of carcinoma.

(To be continued.)

THE MEDICAL CORPS OF THE U. S. NAVY.

BY FREDERICK HORNER, M.D.

UNITED STATES NAVY.

In connection with the early history of the American Navy as developed into a distinct arm of the national defense, it is interesting to recall the fact that its embryonic origin was first developed in Virginia under royal authority. As early as 1775 the convention of the colonists of Virginia had directed the Committee of Safety to procure armed vessels for the defense of the colony, and the control and management were intrusted to this committee. Accordingly in May, 1776, the House of Burgesses of Virginia foreseeing the coming struggle with the mother country for the independence of the colonies, and recognizing that the vessels of the merchant marine of James River and border harbors of Chesapeake Bay constituted the elements, if armed and equipped, of a squadron already manned by sturdy sailors who had knowledge of the sea, and commanded by officers of the pluck and experience which have ever characterized the captains of the Marine Service, appointed a Board of Naval Commissioners consisting of Thomas Whiting, John Hutchins, Champion Travis, Thomas Newton and George Webb, who met first in Williamsburg, then the capital of Virginia. These men adopted a plan for the creation of a naval force of seventy vessels which had been employed for purposes of commerce, having been constructed at the Chickahominy Navy Yard, near Norfolk, Va. Among the naval surgeons commissioned for this service during the Revolution were Dr. Balfour, an eminent physician of Norfolk, Va.; Kemp, Lyon, McClurg, Brockenborough, Christie, Reynolds, Sharpless, Pell and others. It was after this period that the seamen and naval forces of the New England States were organized for the national defense. At this period the merchant marine were not usually provided with a surgeon, and physicians who were competent to practice were obliged to go abroad to the universities of Edinburgh or Cambridge to obtain a diploma. In 1764 when the first medical college in America was founded in Philadelphia, now the University of Pennsylvania, and afterwards in 1825 when the University of Virginia had established a medical department, in 1827 the supply of surgeons for the naval service was equal to the requirement, though it may be added in the early days of the colonial period, "physick was not regarded as a fit profession for a gentleman of Southern birth, who, haply was possessed of ample fortune, and had no need to practice a profession."

Among the surgeons commissioned first were W. A. W. Spottswood, Cornick, Harris, Chase, G. R. B. Horner, Brownlee, Whelan Maxwell, Temstell, Squibb, Elisha Kane and others. Surgeon-General

Harris, while chief of the bureau of medicine and surgery contributed to systematize the work committed to the naval medical officers and proved equal to the arduous duties of his office; and with his successor, Surgeon William Whelan, elevated the standard, intellectually, and scientifically, for the admission and promotion of the junior medical officers of the Navy and also aided in promoting the success of the repeated explorations of Passed Assistant Surgeon Elisha K. Kane, in vessels fitted out by Mr. Grinnell and the Navy Department in command of Dr. Kane, and also in expeditions to Paraguay and to Japan in 1851. The war between the United States and Mexico occurred during Dr. Harris's term of office, and the war of the Rebellion in this country during that of Surgeon-General Whelan's term. The surgeons in active service during this period displayed uncommon ability and zeal in the performance of their duties, and their printed reports to the office of the Surgeon-General furnish valuable data connected with the various branches of practical medicine and surgery. A decided impetus for such publications was given to the Naval Medical Corps by the stirring events which then occurred. Under the direction of Surgeon-General J. C. Palmer and Medical Inspector A. L. Gihon, a neat volume of medical essays, compiled from reports to the Bureau, were published by order of the Navy Department. Surgeon R. C. Dean, Medical Inspector, U. S. N., made a valuable report on the naval medical schools of France and England, showing the liberal policy of the governments of those lands toward their naval medical officers. For example, in Great Britain there is established a naval medical school for the Army and Navy at the Royal Victoria Hospital at Netley. Here a per diem of 5s. is allowed the officers, with excellent quarters and subsistence, and according to a late Navy List of the British Admiralty, a liberal pension is allowed not only the widows but the children also, of the medical officers. Dr. J. D. Gatewood, Surgeon, U. S. N., contributed a valuable report on Hospital Statistics of the Naval Hospitals of Europe, showing that the average mortality was as low as 10 per cent. for the Royal Naval Hospital at Great Yarmouth, England. This report was read before the Medical Congress of the Columbian Exposition at Chicago. Among the earliest authors of the Naval Medical Corps who have, from time to time made valuable contributions to current periodical and book literature are Surgeons Ruschenberger, G. R. B. Horner, Foltz, Wilson, Wales, Brown, Wise and others. Among such publications may be enumerated: "Endemic Influence of Evil Government and Medical Statistics of the Island of Minorca," by Surgeon J. M. Foltz; "Medical Topography of Brazil," "Medical Statistics during a Cruise to the Mediterranean" and "Naval Surgery," by Surgeon G. R. B. Horner; "Arctic Explorations in the years 1853-54-55," by Elisha Kent Kane, M.D., U. S. N.; "Naval Hygiene," by Surgeon Wilson; "Mechanical Surgery," by Surgeon P. S. Wales. Such contributions betoken a commendable zeal and industry on the part of the authors, furnish evidence of their talents and erudition, and present examples worthy of imitation.

The second epoch in the history of the American Navy was marked by the occurrence of the Civil War, when a large number of naval surgeons of the Southern States either resigned from the service or refused to take the required oath of loyalty to the Federal Union

and were dropped from the registered list when the reorganization of the Navy was effected in 1861. A small number were true to the old Ship of State, ready to be scoffed at by erring ones, and, perhaps, because of the spirit of an ancestry that had signed the Articles of Confederation, the Declaration of Independence and the Constitution of the United States. Among others of this number were Surgeon G. R. B. Horner and the writer, and of those who also thought they were right were Surgeon Dinwiddie Phillips, of the ironclad *Merrimac* and Surgeon Galt, of the *Alabama*.

The decade which succeeded the return of peace to the country was marked by an accession to the number of naval medical appointees from the Southern States, and during the intervening period the strength and efficiency of the Corps has been greatly developed. The number of 170, the maximum allowed by Act of Congress is meager indeed in comparison with the 502 surgeons of the British Navy, with its Director General a Baronet of the realm, and a corps of inspector-generals; first class, staff officers; second, surgeons and fourth, medical inspector-generals of the royal hospitals at home stations and abroad. In this connection it may be remarked, *en passant*, that American authorities do not show the favor to our Naval Medical Corps, that they do to line officers, who as cadets and ensigns whose education and maintenance at the Naval Academy, Annapolis, cost the taxpayers of the country \$500 a year for each cadet. The surgical staff has no such bonus accorded them at any period of their service by our Government.

Finally, it may be asserted with truth, that the Medical Corps of the U. S. Navy has ever maintained a high professional status, and an *esprit du corps* challenging criticism. Through the efforts of Surgeon-General Tryon, the U. S. Naval Laboratory and Department of Instruction has been founded in Washington City. The courses in bacteriology and analytical chemistry have proved valuable and instructive to the class of Assistant Surgeons, candidates for examination and promotion to a higher rank. The U. S. Naval Museum, now removed to the Naval Observatory Buildings, has already proved useful in developing all that is of value in the sphere of mechanical inventive art, as well as forming the nucleus of a fine library. Surgeon-General P. S. Wales and J. Mills Browne during their terms of office contributed largely toward the success of the Museum and founded in connection with it a Naval Medical Society, before which were read and discussed interesting medical and surgical papers that were published under the supervision of Surgeons Van Reyphen and Beyer. A few retired medical officers of the Navy were Fellows of this society, and were glad to exchange greetings with old friends, and enjoy the privilege of taking part in the proceedings. The Naval Medical Staff has able representative delegates appointed to the annual meetings of the AMERICAN MEDICAL ASSOCIATION, to the Association of the Military Surgeons of the United States, to the various international medical congresses of the world, and the American Public Health Association.

The admirable report of Surgeon-General Tryon urges the necessity of an organized Hospital Corps, well instructed for all duties on board modern vessels of war, and concludes with the statement that thirty permits were granted to applicants, to be examined by a late Board of Naval Medical Examiners; of the

thirty, ten failed to present themselves, five were rejected physically, twelve professionally and three passed the examinations. The Naval Medical Examiners have, in fact, no option than that of exclusion of many talented and learned men from the Naval Medical Corps, because the legal number of 170 surgeons, passed assistant, and assistant surgeons, as already stated, is the number allowed by law, though the Navy of the United States represents a nationality of 65,000,000 people.

The comment may be pardoned that concerning the bill for the reorganization of the *personnel* of the Navy, the legislators of Congress, themselves dependent at times more or less upon physicians and surgeons for relief, surely may be trusted to do right toward the interests of the Naval Medical Corps.

Congress may recall that Passed Assistant Surgeon E. K. Kane proved to be not only equal during his medical service to professional duty, but developed into one of the most renowned captains of the nineteenth century, the discoverer of a terra incognita, Washington Land and an open Polar Sea in higher latitudes than ever before explored, to attain which even the courage and sagacity of a Columbus would hardly have undertaken it, and in the accomplishment of which he solved the mystery—so long desired in vain—of the fate of his illustrious co-explorer, the lamented Sir John Franklin.

Congress knows, also, that Surgeon James M. Ambler proved his heroic mold by remaining with the brave Commander DeLong, choosing death by cold and starvation with him and their comrades, than to accept the offer to escape and seek help.

Congress knows how Dr. John B. Hamilton, when Chief of the U. S. Marine-Hospital Service, with his efficient co-workers rescued hundreds of the fever-stricken citizens of the cities of the Southern States in the midst of the "pestilence that walketh in darkness and the destruction that wasteth at noon-day," by the establishment of refuge camps and the enforcement of prompt, incisive and strict sanitary and quarantine regulations; and with a kindred spirit, Dr. G. B. Thornton, when the Mound City of the West was decimated by a like scourge, with soldier-like courage and vested municipal authority had destroyed streets of houses, and chattels teeming with the germs of a death-dealing plague. And thus, these self-sacrificing physicians with others, who bear the mantle of the Divine Physician and stand between the living and the dead, fearlessly sought to save life; yea, with equal courage with Surgeon Edward Shippen were faithful to duty, as he was when he conveyed an order—Perry-like, of Lake Erie memory—in the harbor of Charleston in the face of the raking fire from the enemy, from one ship to another.

Indeed, it is not presumption to recall the fact that the physicians and surgeons of the United States Army and Navy, during the late fratricidal war, on the assertion of the late Prof. S. W. Gross contributed to perpetuate the Federal Union, since this class as non-belligerents and as represented by the AMERICAN MEDICAL ASSOCIATION, "suffered no disruption of the fraternal bonds which united them as brethren." Men of this stamp are entitled to be fairly dealt with by their peers of the Naval Service, and by the people's representatives in Congress, whatever reorganization of the *personnel* of the Navy may be agreed upon.

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ETHYL BROMID ANESTHESIA IN POST-NASAL ADENOID GROWTHS.

Read before the Chicago Medical Society Feb. 4, 1895.

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The subjects of "adenoids" is such a well-worn one that I would not venture to bring it before the society, had I not been encouraged in my doubts as to the proper way of operating on these growths, by a recent discussion of this very question at a meeting of the London Laryngological Society. It appeared there, too, how wide is the diversity which exists as to the choice of the anesthetic, the posture of the patient, etc. Since conditions are different with us, especially resulting from the preference given either over chloroform by the profession at large, and the popular distrust in which the latter drug is held; since, furthermore, this mode of operation with ethyl bromid has not been described in American literature, I am in hopes that the discussion called forth by this short paper will prove to be out of proportion to its length.

While it is held by many that anesthesia is not to be induced for this operation, I make bold to consider it both cruel and immoral unnecessarily to inflict severe—and often, quite severe—pain on a nervous, terrified, struggling child. The poor little one can not accept an adult's logic; to it this manipulation is as frightful as a much larger one would be to its parent; and the latter, not infrequently, prefers to escape even the momentary pain caused by the extraction of a tooth. It further demoralizes the child, who should look upon the physician as its friend, for whom it will open its mouth when requested to do so. Children have excellent memories for injuries and insults offered them. One little girl, for instance, was held by her father and two other men while the physician amputated the tonsils about three years ago. She can not be prevailed upon to enter that office building again, and still retains the adenoids and an abiding distrust of physicians. To use main force seems to the child's mind as convincing as the wise answer given by the proverbial eagle to the little bird protesting against being devoured, "but I am big, and you are small."

The numerous operations on the non-anesthetized child which one had opportunity to witness or perform at the Berlin Laryngological Clinic appeared unsatisfactory to me (and since then the method has been changed there). I, therefore, advise anesthesia in younger children, but operate without it in older children when there is only a hypertrophied Luschka's tonsil which can be removed *en masse*. Chloroform and ether were employed by me in a limited number of cases. The child lay either on one side, or on its back with overhanging head. Chloroform is not feared without good reason; there were nine deaths in England alone within one year in just this operation. Ether, on the other hand, is very disagreeable to both patient and operator, as it takes much longer