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The early history of ophthalmology + + + + +

THE EARLY HISTORY OF OPHTHALMOLOGY AND OTOTOLOGY IN
BALTIMORE (1800-1850). ✓

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THE EARLY HISTORY OF OPHTHALMOLOGY AND OTOTOLOGY IN BALTIMORE (1800-1850)*

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An old book tells us that each generation may be looked upon as standing on the shoulders of its fathers. If its vision is clearer, its intellectual view less obstructed, its horizon broader, it is in great part due to the height to which others have raised it, to the support others have given. Unmindful of this, it is apt to exaggerate its greatness and the importance of its own work.

In the following narrative I have brought together all that I could find relating to the lives and labors of those who, in the earlier years of this century and in our own city, tilled the soil of ophthalmology and otology. Some have been forgotten, few have been accorded deserved recognition.

Are not many of us as ignorant of their names and works as an old physician from whose memories I had hoped to obtain information, but whose response was, "No work was done in Baltimore in those departments of medicine before 1850"? I must confess that when my attention was first drawn to this subject I knew of but one work of importance which a Baltimore physician had rendered to ophthalmology.

There is no reference in literature to anything done in Baltimore in the two branches we are considering before the beginning of this century. We must remember that in 1800 the population of Baltimore City was 26,614 and that in 1802 there were but 44 physicians.

It is probable that there were here as elsewhere those who

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confined themselves to diseases of the eye. This is indicated by a resolution adopted at the convention of the Medical and Chirurgical Faculty of Maryland in 1805.* It was resolved that "the Board of Examiners be authorised to grant special licenses to dentists and oculists to practice in their respective branches, subjecting them to an examination only on the branches they possess; and that such licentiates shall pay ten dollars for each license so obtained; provided it shall be the opinion of the attorney-general that the law authorizes the examiners to grant such licenses. The secretary having submitted the preceding resolution to the then attorney-general, he gave it as his opinion that the law authorized the board to act according to the spirit of the resolution." These "occulists" did not, it appears, stand in very good repute.

In the review in 1825 of an American treatise on diseases of the eye, the writer, who was probably Dr. Isaac Hays, the distinguished editor of the *American Journal of Medical Sciences* and an ophthalmologist of note, describes the condition of ophthalmology in the early years of this century. He tells us that "the neglect to which disorders of the eye were too long consigned is truly astonishing. Prepossessed with an idea that there was something peculiar in the diseases attacking different parts, physicians entirely abandoned these affections to persons who were exclusively devoted to them and were totally ignorant of the laws which influence diseases of other organs. To this cause is to be attributed the slow progress which the science of ophthalmology made during many centuries. The history of this science shows that while it made most rapid advances in improvement by the investigations of medical men, it invariably, when abandoned to professed oculists, not only ceased to advance but actually retrograded. . . . In this country much apathy has existed, and we fear still exists, with regard to these affections. Some of our distinguished surgeons have not, it is true, entirely neglected them; yet the mass of medical practitioners have paid little attention to them, and the science has advanced so rapidly during the few years that we believe few have kept pace with the improvements that have been made. The length of time that generally elapses

* Summary of Proceedings, &c., published in 1817.

before opinions of European writers are diffused in this country—the want of regular lectures—and above all, clinical instruction and the opportunities furnished of observing these diseases in institutions established for the reception of these cases, are the cause, no doubt, of the present state of the science among us.”

He mentions that the New York Eye Infirmary was established in 1820, the Pennsylvania Infirmary for Diseases of the Eye and Ear in 1822, and “with respect to the institution at Baltimore he has but little information to communicate. It is attached to the Baltimore Dispensary and is committed to the care of the author of this work.” [Dr. Geo. Frick.]

PIERRE CHATARD.

The earliest Baltimore publication having reference to diseases of the eye is found in a paper written by Dr. Pierre Chatard in the *Medical Repository*, vol. VII, p. 28. Dr. Chatard was born and educated in France, and had settled in Baltimore in 1797. He was a prolific writer, the paper referred to being one of the earliest. It was entitled “An account of a case of *Fistula Lachrymalis*, with reflections on the different modes of operating in that disease.” The paper describes a case of lachrymal fistula relieved by introducing threads of silk after the manner of a seton through the lachrymal duct and gradually increasing their number. He discusses at length the various methods in vogue at that time of treating the disease. It is written in an interesting and elegant manner. None of the other writings of Chatard relate to diseases of the eye.

WILLIAM GIBSON.

During the second decade of this century the celebrated surgeon, Wm. Gibson, practiced in Baltimore. Wm. Gibson was born in 1784 in Baltimore, and was graduated in medicine in Edinburgh in 1809. He was a physician to the Baltimore General Dispensary in 1818–19, and professor of surgery at the University of Maryland from 1812–19, resigning to occupy the same chair at the University of Pennsylvania from 1819–54. He died about 1858 (?).

His numerous publications date mainly from the latter

period of his activity, but there are two notable and very interesting references to ophthalmic surgery dating from the Baltimore period.

In Hirsch's History of Ophthalmology* we find the statement that Prof. Gibson of Baltimore had made the experiment of introducing a seton through the cataractous lens, with the view of producing its absorption, so original an experiment that Hirsch cites the description given by Dr. John Revere untranslated. My friend, Dr. O'Connor of Boston, had the kindness of looking up the reference in the New England Journal of Medicine, vol. VIII, p. 119, of 1819, and I will give this account in full because of its intense interest.

Extract of a letter to one of the editors:

"I am desirous of communicating through the medium of the New England Journal a new mode of operating for cataract, which has been projected and practiced recently, *in two cases*, with the most satisfactory success, by my friend, Dr. Gibson, professor of surgery at the University of Maryland.

The operation was performed in the following manner: The iris was in the first place dilated by the application of atropa belladonna. A common sewing needle, slightly curved and armed with a single thread of silk, was then passed through the tunica sclerotica about two lines from the cornea, where the couching needle is usually introduced, through the opaque lens and out of the opposite side of the cornea, at a point corresponding to the one at which it was introduced. The silk being drawn through, and the ends cut off, a single thread was thus left passing through the ball of the eye, and acting on the diseased lens in the manner of a seton. It was feared that serious inconvenience might arise from the irritation produced upon the tunica conjunctiva, from the excessive sensibility of this membrane. Fortunately, however, neither this nor any other accident intervened, and at the end of ten days, in both cases the diseased lens had disappeared, and, in its place, the silk was distinctly seen passing like a bar across the pupil of the eye. The silk was withdrawn, and in a few days the vision was restored. In the third and last case in which this operation was performed it failed in consequence of the iris being wounded. This caused such an inflammation of the organ that it was deemed proper to withdraw the seton at a very early period. This accident was attributed to not using the belladonna. One would think that a common sewing needle is not the most convenient instru-

* Graefe and Saemisch's Handbuch, Vol. VII, p. 517.

ment that could be devised for this purpose, on account of the dense structure of the part through which it is to pass, and the difficulty of having the perfect command of any instrument without a handle. From the nature of the disease, from the known effects of this remedy when applied to other parts of the body, and from the success which has already been experienced, there seems to be good reason to hope that this will be found an important improvement on the established practice in many forms, if not in every variety of the disease. But the practical benefit to be derived from this operation can only be tested by a more enlarged observation than in this country ever falls to the lot of any individual.

I remain yours,

J. REVERE.

Balto., Mch. 2nd. 1819."

We learn from Hirsch that Loewenhardt in 1828 operated in a similar manner for secondary cataract with anterior and posterior synechiæ, likewise with good result; it appears that others have not attempted the operation.

In the American Appendix to the second edition of Cooper's Dictionary of Practical Surgery, edited in America in 1844 by David Meredith Reese, who in 1842 and 1843 was professor in Washington University of Baltimore, we find a very curious reference to Professor Gibson under the head of strabismus: "It appears from the Institutes of Surgery that Professor Gibson attempted the cure of strabismus by dividing the recti muscles of the eye, precisely as now practiced, some twenty years since, in Baltimore. Soon after he repeated it unsuccessfully in Philadelphia in several cases, and was induced to abandon it by unfavorable opinions expressed on the operation by Dr. Physick. He, however, inculcated the propriety of the operation upon his class many years since, and Dr. A. E. Hosack, of New York, then one of his pupils, distinctly recollects Dr. Gibson's expressions of confidence that the operation would ultimately succeed."

I had no little difficulty in finding the reference to which Dr. Reese refers. The first five editions of Gibson's Institutes of Surgery (published between 1824 and 1838) contain no chapter devoted to strabismus, and in the seventh edition the long account of strabismus and its treatment consists almost entirely in a paper written by Charles Bell and sent by him to Gibson. In this chapter the above reference is likewise not to be found. It is only in the sixth edition, published in 1841,

that we find the reference. It is of such importance that I shall give it in detail. On page 375 Gibson states that:

“In the year 1818, while practising my profession extensively in Baltimore, the late Mr. B. J. consulted me about his daughter, a child of eleven or twelve years of age, both of whose eyes were directed very much inwards, and were thereby greatly deformed by a squint. I advised a pair of goggles, so contrived, by having a small opening in the centre of each, as to oblige the child to direct the cornea to these openings, and by perseverance for several weeks, succeeded in diminishing the deformity but not effecting a cure. In the course of my visits the child remarked at different times that her eyes felt as if tied by a string. Struck with this observation, and conceiving the disease might depend upon shortening of the internal rectus muscle, I determined, the first opportunity, to try the result of division of that muscle; and as the friends of my young patient were unwilling the experiment should be first tried upon her, I selected a hospital patient, and after some difficulty in fixing the eyeball and in cutting the muscle across, succeeded in restoring the eye partially to its natural situation. Upon two other patients I repeated the experiment, without much better success, but on dividing a muscle in a fourth patient, after my removal to Philadelphia, the eye was so completely turned to the opposite direction as to bury the cornea beneath the lids and create a much greater deformity than had previously existed. Upon showing the patient to Dr. Physick, he advised the experiments to be abandoned, as likely to be followed by very unfavorable results. I mention these circumstances, not from a desire to receive credit as an inventor or to detract from the claims of the distinguished surgeon with whom the modern operation of strabismus originated, but merely as a curious fact, calculating to show the importance of not laying aside processes apparently founded upon correct principles, simply because we are at first foiled in our attempts to execute them. How much benefit would have resulted to the community if I had followed up my operations until I ascertained the proper mode of correcting them, or how much injury I might have inflicted upon individuals by perseverance in the attempt, I shall not stop to inquire. It is sufficient for me to announce the fact—which I have no doubt could be easily substantiated by many pupils who attended my early lectures, some of whom have indeed already proffered their testimony—without being over-solicitous, in setting up a claim as an inventor, of exposing my awkwardness and perhaps want of knowledge of the principles that should have guided me in following out the practice I had attempted to institute.”

It may not be out of place to mention that Stromeyer's important monograph, in which he recommended division of the muscle for strabismus appeared in 1838!

The chapters devoted to diseases of the eye in Gibson's Institutes are important, but as the book appeared after the author had left Baltimore, it is not proper to discuss them here.

Another reference which shows Gibson's interest in the eye occurs in the American Medical Recorder (vol. II, p. 283). It is a "Letter of Charles Bell to Professor Gibson, of Baltimore," and its subject is, "The New Coat of the Eye discovered by McCarthy's demonstrator, Jacobs."

GEORGE FRICK.*

We may next take up the most important name of this narrative, that of Dr. George Frick, the author of a valuable treatise on diseases of the eye, the first work of the kind that appeared in America.

George Frick was born in Baltimore in 1793. After obtaining a broad classical education he entered the University of Pennsylvania, where he obtained the degree of doctor of medicine in 1815, and in 1817 he was admitted as licentiate of medicine into the Medical and Chirurgical Faculty of Maryland. He then spent several years abroad, returning to Baltimore about 1819 to engage in the practice of ophthalmology. He was appointed surgeon to the Baltimore General Dispensary, where he established the first Eye Dispensary in Baltimore, in 1824. In 1822 he delivered clinical lectures at the Maryland Hospital. His name is found on the list of vaccine physicians for 1821.

He was a member of various medical societies; was secretary of the Faculty in 1823, and joined the Maryland Medical Society in 1822. He was much interested in general science, and was one of four physicians to organize a society for promoting science, in 1819. He was likewise a member of the

*The accompanying portrait of Dr. Frick is copied from one recently presented to the Medical and Chirurgical Faculty, together with a case of instruments which belonged to the doctor, by his niece, Mrs. White and her daughter, Miss Mary White.

Maryland Academy of Sciences, its librarian in 1824 and curator in 1836.



DR. GEORGE FRICK.

He devoted himself to the practice of ophthalmology and to the cultivation of general scientific studies, as well as to music for a number of years. He was unfortunate in growing very deaf before middle life, and it is probable that this inter-

ferred greatly with his practice of medicine; for somewhere about 1840 he entirely relinquished it and left Baltimore to spend most of his time in Europe, paying occasional visits to this country. He died in Dresden, March 26th, 1870, aged 77 years. Dr. Frick had never married. He was a man of very retiring and modest character and of kind disposition. He was a careful scientific student and his work and writings deserve high praise.

His first writing was his thesis for the degree in medicine; its subject was "On the Meloe Vesicatorium" (1815). In 1820-21 his article on "Observations on Cataract and the various modes of operating for its cure" appeared in the *American Medical Recorder of Philadelphia*. These articles cover over 40 pages. In 1821 an article on "Observation of the various forms of Conjunctivitis" appeared in the same journal, and in 1823 his paper on "Observation on Artificial Pupil and the modes of operating for its cure."* His most important work, however, was "A Treatise on the Diseases of the Eye; including the doctrines and practice of the most eminent modern surgeons and particularly those of Professor Beer," which was published in Baltimore by Fielding Lucas, Jr., in 1823. It was inscribed to his teacher, Dr. Physick of Philadelphia. The articles above referred to, though somewhat more elaborate, were in the main identical with the corresponding chapters of the treatise and do not therefore require special consideration. The treatise is of considerable value.†

* This curious error is cited as it is found.

† It is interesting to find numerous pencil notes in the articles in the copies of the *American Medical Recorder* at the library of the Medical and Chirurgical Faculty of Maryland, notes suggesting slight changes in the phraseology, paragraphing, etc., every one of which has been adopted in the treatise. I have been able to trace this copy, which was bought with other books by Dr. John Morris at a public sale of the library of Dr. John Buckler, who was related by marriage to Dr. Frick, and whose library thus passed into Dr. Buckler's. Numerous books at our library contain Dr. Frick's autograph, and one, a copy of Gibson's *Institutes of Surgery*, has an inscription of the author to his friend Dr. Frick. In Beer's work on ophthalmology there are interesting pencil notes and several pages of written matter which correspond so thoroughly with Dr. Frick's writing that I have no hesitation in stating that they are his.

It is well and clearly written, the system upon which it is classified is excellent, and no greater praise could be given it than stating the fact that it was republished three years later in London by an English surgeon, Richard Welbank, a member of the Royal College of Surgeons and of the Medical and Chirurgical Society of London, and dedicated to the ophthalmologist William Lawrence. Numerous foot-notes were added, but the text suffered no change.

The reviews which the book received were very complimentary. The Philadelphia Journal of Medical and Physical Sciences (probably Dr. Isaac Hays) contains a review covering 18 pages: "The author evidently possesses a cultivated and well disciplined mind; he appears to be intimately familiar with German writers, and we feel much indebted to him for making us acquainted with their writings."

In the American Medical Recorder of 1824 a still longer review is to be found, covering 32 pages. The writer describes the book in terms of high praise. He "offers the humble tribute of (his) thanks to the author for the benefits which he has conferred on the profession generally, by presenting them with a volume of great value and utility, and one which was much wanted. As a manual of the diseases of the eye, we believe it to be the best which has been published. It contains all the improvements which have enriched ophthalmic surgery, in such a surprising degree within a few years past," etc.

In 1825 this work was placed on the list of those which the student was required to have read before applying to the Medical and Chirurgical Faculty of Maryland for the examination for licentiate in medicine.

Hirsch in his history of ophthalmology says that "George Frick was the apostle of the ophthalmological school of Vienna in North America; his treatise was next to Saunders's, the first large treatise on ophthalmology in America, and was received by physicians with great praise." Saunders's book was an English work and was republished in Philadelphia in 1821, two years before Frick's. The only other book in the English language of a similar kind was that of Travers, which appeared in London in 1820-21-24.

We thus see that Frick's book was the first American

treatise (and for a number of years it remained alone). The work is much quoted in Cooper's Dictionary of Surgery.

In Quinan's Medical Annals of Baltimore I find a reference to a paper of Dr. Frick's "On the Senses," which he tells us was read before the Medical Society of Maryland in 1821. I have been unable to find this paper.

In Cordell's History of the University of Maryland we learn that the foundation of the Infirmary was laid in 1823 and that patients were received in the same year. Of the four wards, "one was reserved for eye cases, instruction in ophthalmic surgery forming a prominent feature in the course. This was during the time of Frick's greatest activity, and it is possible that the prominence given to ophthalmology was through him, and that he delivered the clinical lectures in this branch. I am unable to verify this.

In conclusion it is interesting to call attention to the fact that Dr. George Frick was the uncle of the distinguished clinician, Professor Charles Frick.

HORATIO G. JAMESON.

Horatio G. Jameson, born in Pennsylvania about 1792, graduated in medicine at the University of Maryland in 1813. He held a number of important public positions, having been consulting surgeon of the Baltimore City Hospital from 1819 to 1835, consulting physician of the board of health of Baltimore City in 1827-35; he was incorporator of the Washington Medical University in 1827, and professor of surgery and surgical anatomy in the same from 1827-35, when he became professor of surgery in the Cincinnati Medical College. He was one of the most prominent surgeons of Baltimore for a number of years, and a very active contributor to medical journals, writing important papers in medicine and in surgery. He was the editor of the Maryland Medical Recorder during its existence of several years (Sept. 1829-Nov. 1832), and a large number of its articles are from his pen.

Jameson appears to have been much interested in diseases of the eye. We find frequent references to publications on these subjects throughout his journal, several of which have remarks added by the editor. In vol. 2 there is an article on the "Pathological Sympathy between Eye and Larynx" (p. 117).

This article is without any value, indeed it is difficult to understand the real significance of his report after careful reading. An article on "A case of Enlargement of the Eye following the entrance of steel into the eye" describes the panophthalmitis followed by bursting and shrinking of the eyeball (p. 601).

In another paper he described "two cases of ossification of the lens with luxation through the pupil." These cases are of some interest. He extracted the lenses and the patients did well (p. 608). An article on amaurosis associated with inordinate thirst was probably written by Jameson (p. 664).

In the American Medical Recorder of Philadelphia (vol. XII, p. 340) we find an interesting account of the successful removal of "An encysted tumor of the orbit."

In discussing a letter on "Ophthalmia in the Philadelphia Alms House," written to Dr. Rush, Jameson considers the question of the endemic or contagious character of the ophthalmia, excludes the latter view, and attributes the very severe disease to the vitiated state of the atmosphere. He states that "we do not as a general rule of practice bleed sufficiently in cases of ophthalmia."

JOHN MASON GIBSON.

John Mason Gibson in 1832 published in Baltimore (W. R. Lucas) a "Condensation of Matter upon the Anatomy, Surgical Operations and Treatment of Diseases of the Eye, together with remarks. Embellished with twelve lithographic plates, illustrative of the anatomy, operations, and morbid appearance."

I am unable to give any details of this author's life. I find that he was admitted into the Faculty in 1825, and that his name appears as late as 1848 in the list of members with the title of L. M. In the next succeeding list published in 1853 Gibson's name is missing.

In the preface he tells us that his book is an "attempt at collecting the best matter on diseases of the eye." That "diseases casual to vision are many and frequently met with in this country; the curative practice has not been sufficiently inculcated in our universities, by impressing upon the mind of

the student where and when the importance and great nicety of judgment are requisite in the treatment of them, and that by inadvertent and mal-practice the victim may grope through his existence here in the valley of darkness."

The work is one of compilation, "being made up of extensive quotations from the classical writers of the day." He claims originality only in the construction of his plates, and so far he is certainly correct, for the drawings are quite unlike anything seen in nature.

The arrangement of the work is very curious. The chapters follow in this order: Anatomy of the eyeball, cataract, ophthalmia, corneitis, iritis, choroiditis, retinitis, inflammation of the lens and its capsule, ulcers of the cornea, opacities of the cornea, ptergium, prolapse of the iris, extirpation of the eyeball, extraneous bodies, diseases of the lachrymal apparatus, under which is included entropium, ectropium, epiphora, encanthis, injury of lids, ophthalmia tarsi and fistula lachrymalis, looking very much as though the subjects had been drawn haphazard from a grab-bag.*

At the end of several chapters the author adds original remarks. When we consider the very excellent and systematic work which Frick had published, nine years previously, as well as such other works from which copious quotations are made, it is quite inexplicable why Gibson showed such disregard of systematic classification, or indeed what purpose he had in publishing the work at all.

DR. JOHN HARPER.

Dr. David Meredith Reese, in his American edition of Cooper's Dictionary of Practical Surgery, first published in 1832, tells us, under the section of cataract, that "one of the most successful operators in this country is Dr. John Harper, of Baltimore, and he seldom adopts any other operation than this (laceration of the capsule and lens substance), which he repeats as often as necessary on the same eye." I have given myself great pains to obtain some information concerning this "successful operator," but his memories appear to have been

* Not a few important subjects are entirely ignored, viz. errors of refraction, strabismus, etc.

completely effaced. One single reference is to be found, a short obituary notice. In the Maryland Medical Recorder (vol. II, 179) there is a notice of the death of four members of the Medical and Chirurgical Faculty of the State of Maryland. One of these reads as follows: "Died in the month of January, 1831, Doctor John Harper. Doctor Harper was a native of Ireland, and graduated at Glasgow. He was well-known as an oculist." The title of oculist appears to have been elevated to the dignity of a special practice of medicine within a few years. For Harper was a member of the Faculty, and not of the despised class of oculists mentioned in the beginning of this paper.

WILLIAM ALEXANDER CLENDINEN.

Wm. A. Clendinen graduated in the medical department of the University of Maryland in 1840, a classmate of Dr. G. W. Miltenberger. He died of cholera at New Orleans in 1849, having been seized with the disease while dissecting a victim of the epidemic. After his graduation he traveled extensively, devoting his time to the study of medicine. In the Boston Medical and Surgical Journal in 1847 we find several papers which were translations from the work of Prof. Desmarres. In his letter to the editors he tells us that the extracts are part of a "translation upon which he is now engaged"; he expresses his gratitude to Prof. Desmarres, who "has entrusted to him an onerous but useful task, one which from (his) connection with him (he) may be able to perform advantageously to readers of the English language." In the second article, published in the same journal, we find after the name of the author, "Chef de la clinique oculaire." There were in all but three articles, and the promised book never made its appearance, perhaps on account of the untimely death of the author.

OTOLOGY.

The early contributions to Otolgy in Baltimore were very few. Two names deserve recognition; the first of these is that of the renowned surgeon,

NATHAN RHYNO SMITH.

It is beyond the province of this paper to give a biographical sketch of Dr. Smith. A very complete sketch can be found in Dr. Cordell's History of the University of Maryland. He was born in 1797 in New Hampshire, graduated as A. M. in 1817, and as M. D. in 1823 in Yale College. He was professor of anatomy and surgery in the University of Vermont in 1825, soon leaving to occupy the chair of anatomy in the newly organized Jefferson Medical College of Philadelphia. From 1827-29 he was professor of anatomy in the University of Maryland, and from 1829-38 he occupied the chair of surgery at the same university, leaving this for three years to occupy the chair of theory and practice in the Transylvania University. He resumed it again in 1841 and held it until 1869.

One of the earliest writings of this prolific worker was the translation of a treatise on the ear from the French of Saissy,* with additions by the translator on diseases of the external ear. This book was published in Baltimore in 1829, and was, so far as I can learn, the second book on diseases of the ear printed in America, the first having been an American edition of Saunders on the eye and ear in 1821.

Saissy's work was "highly esteemed in France," and was one of the important factors in the revival of modern otology. In his preface Dr. Smith tells us that "a concise manual on the diseases of the ear is an acknowledged desideratum in our medical literature. No sufficient work on the subject has ever been issued from the American press. With a view to supply this deficiency (he has) translated the following pages from the French of Saissy . . . corrected and enlarged by its author, and after his death published in 1827 by his friend Montaignon, etc.

"It embodies the excellencies of Saunders, Cooper, Leschevin, Maunoir, Itard and Alard . . .

"The attention of the reader will be particularly occupied

*An Essay on the Diseases of the Internal Ear, by J. A. Saissy, M. D., translated from the French by Nathan Rhyno Smith, M. D., Professor of Surgery in the University of Maryland, with a supplement on Diseases of the External Ear, by the translator. Published by Hatch & Dunning, Baltimore, 1829.

with Saissy's excellent method of injecting the ear through the eustachian tube. We very well know how frequently the external ear is obstructed by its own secretions, free as is their egress from this cavity. The internal ear is also lined with a membrane which furnishes an excrementitious fluid. It can escape only by the narrow channel of the eustachian tube. How frequently then must it be delayed in the cavity of the tympanum and mastoid cells, giving rise to any degree of mischief."

To render "the work more complete and useful to the medical pupil (he has) added a brief supplement on diseases of the external ear. On this score, however, (he) claims nothing, as (his) addition is made up of commonplace principles and precepts subjoined merely for the purpose named above." He concludes: "I have, it is true, for perforating the tympanum devised a new instrument which I trust will be useful."

The part of the book most interesting to us is the supplement on diseases of the external ear, covering about twenty pages. These chapters are written in the most concise and simple manner and cover most of the inflammatory affections of the auditory canal, congenital deformities, injuries as well as the treatment of foreign bodies, insects and indurated wax in the auditory canal.

He describes his method of inspecting the canal as being "best accomplished by placing the head in such an attitude as to suffer the sun's rays to enter the meatus and impinge upon the tympanum. To effect this, the operator must seize the external ear, and drawing it outward from the head, extend and straighten the cartilaginous part of the meatus. I have been able to inspect the ear more perfectly by introducing, at the same moment, a steel director, with its groove toward the meatus and its convex side pressed firmly against the anterior walls. The passage is thereby straightened and expanded. If there be no wax present the tympanum will be seen of a pearly white color and concave."

The little instrument which he devised for perforating the membrani tympani is a minute trephine, by revolving which a circular piece of the drum was excised. His object in constructing this instrument was to obtain a larger opening, for he tells us that in two instances in which he had occasion to

perforate the membrani tympani he found the beneficial effects of the operation soon to cease in consequence of the speedy closure of the artificial opening. The Maryland Medical Recorder of 1829 reviews the work extensively, the review covering twenty pages. The review is by no means flattering.

It is very apparent that Dr. Nathan R. Smith must have been deeply interested in the subject of the diseases of the ear. He had an extensive practice in diseases of the ear, and also of the eye, though none of his publications deal with the latter organ. Dr. Theobald has recently found a drawing of a knife designed by Dr. Smith to slit the lachrymal canal.

DR. JOSHUA I. COHEN.

Dr. Cohen, born in ^{Baltimore} Maryland in 1800, graduated at the University of Maryland in 1823, having been a student in Dr. Nathaniel Potter's office, and soon after devoted himself to the study of diseases of the ear. He was an intimate friend of Dr. George Frick, the oculist, and, like his friend, had wide interest in science beyond the domain of medicine. He thus for a time became professor of mineralogy in the academic department of the University of Maryland. He was much interested in the Medical and Chirurgical Faculty of Maryland, was its treasurer from 1839 to 1856 and president from 57-58. He was also much interested in the Maryland Academy of Sciences.

He practiced until about 1851, devoting himself almost exclusively to otology. His reputation as an aurist must have been quite great, for we read in Reese's American edition of Cooper's Dictionary of Practical Surgery (2nd ed., vol. 2, p. 73, under the heading "Ear"): "In the United States there have been a few surgeons who have distinguished themselves by their success in the treatment of diseases of the ear.

"Dr. Cohen of Baltimore and Dr. Dix of Boston have for several years directed their particular attention to diseases of the internal ear, and to the investigation of the abnormal condition of the tympanum and eustachian tube in cases of deafness. These gentlemen have employed condensing apparatus for administering the air douche through the eustachian tube after the plan of Kramer and others. By the air and also by the water douche, these gentlemen have acquired great tact in the diagnosis and treatment of obstructions in the tube and upon the tympanum."

In 1840 he established, in connection with his friend, Dr. Samuel Chew, an eye and ear institute in Baltimore, in which Dr. Chew had charge of the eye department. Dr. S. C. Chew has had the kindness to inform me that this association between Dr. Cohen and his father lasted for a short time, as his father's appointment to a chair in the University of Maryland compelled him to withdraw from it.

Dr. Cohen was one of the earliest, perhaps the first, aurist in this country. He has left us, however, but one publication which pertains to diseases of the ear. It is entitled "Post-mortem Appearances in a Case of Deafness."* The paper is very short, but is written in the most scientific manner.

In a note written by the editor of the Journal we read that this "valuable communication was read before the American Philosophical Society, at a recent meeting, and is noticed in the proceedings of that body. It has rarely happened that opportunities have been embraced for examining into the condition of the organ of hearing in cases of deafness, or that they have fallen within the observation of an investigator so competent as the author of this paper." The case was that of a patient who died of phthisis. The brain and seventh pair of nerves were examined carefully, but no changes observed. The lower part of the skull was then removed and the ear examined in minute detail.

In the right ear he found the drum-head dull and dark in appearance, irregularly thickened and retracted as a whole, thus diminishing the cavity of the tympanum. The tympanum itself was filled with muco-fibrous membranes passing from the membrani tympani to the posterior walls, presenting a cellular structure. These were carefully divided, exposing the tensor tympani muscle, the tendon of which was found to be of unusual shortness and attached to the handle of the hammer throughout its whole length, thus drawing the bone and the membrani tympani to within a line of cochlear process. Interesting irregularities in the ossicula were noted. The malleus was normal. The incus was undeveloped, diminutive in size. The stapes was wanting with the exception of the base, which was held in place by the circular ligament. The depression of

*Amer. Med. Intelligencer, July 1841 to July 1842, p. 226 (Vol.1).

the oval window was filled with membranous tissue, which likewise covered the fenestra rotunda. The tensor tympani muscle was strongly developed, its tendon short and thick as mentioned above. The stapedius muscle existed, but there was no tendon.

In the left ear the membrana tympani was found to have been entirely destroyed, with the exception of a very thin slip at the anterior inferior edge. The tympanum contained a quantity of yellowish fetid matter, and its lining membrane was completely disorganized. The union between the ossicula was slight, owing to the general disorganization of the ligamentous and muco-fibrous connections. The incus was in place, but the handle of the malleus was depressed. The stapes was not bound down in the oval window, for the annular ligament was entirely destroyed. The tendon of the tensor tympani was disorganized and that of the stapedius destroyed; the whole condition of the tympanum showed a recent active suppuration which did not confine itself to this part; the vestibule was penetrated as well as the mastoid cells; the latter were covered with pus. The cochlea and one of the semicircular canals were examined a day or two subsequently, but there was nothing remarkable about them at this time worthy of note.

Inquiry about the patient led the author to conclude that the faculty of hearing in the right ear had been entirely wanting or was very much impaired for many years.

Though he seems to regard the condition of the right ear to have been congenital, his critical analysis is as acute as the observations themselves are accurate. He cites cases of Morgagni in which membranes filled the cavity of the tympanum, and another in which there was immobility or contracture of the muscles. At the conclusion of his paper he says: "In the case described in this paper, does not the absence of every part of the stapes, with the exception of the base, liken it to the osseous operculum found in the bombinatores, land salamander, and cæcilix; of the effect of which, in the communication of sonorous undulations, I have already spoken?" I am unable to find any other reference to this paper on undulations and do not know whether it was ever published.

This sketch must be brought to a close. Is it necessary to remark what any careful reader must have observed, that there

were physicians in Baltimore in the first half of this century who labored faithfully and well in Ophthalmology and Otology? Their contributions were among the earliest and most important in this country.

In conclusion I desire to express my thanks to Dr. G. W. Miltenberger, to Dr. John Morris and to Dr. Eugene F. Cordell, who furnished me with important notes, as well as my indebtedness to Dr. John R. Quinan's "Medical Annals of Baltimore," and Dr. Cordell's "History of the University of Maryland."

