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MEDICAL WOMEN,

In History and in Present Day Practice,

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Ever since Eve was sufficiently philanthropic to share the legendary apple (which some say has proved to be a lemon) there have been more or less heated and strenuous arguments anent "woman's place" in one or another field of activity, and the year 1915 A. D., not to be outdone by its predecessors, has furnished a more or less acrimonious discussion on "woman's place in medicine." One of our medical brethren from the Athens of America, is reputed to have cast unchivalrous reflections upon the capacity of women for other than social service, and about his remarks, as reported in the daily press, has waged a war of words in which, strange to relate, the women have been noted for their silence. It was not my intention to break this strange and unnatural feminine silence, in which I may admit I was taking an unholy joy, as I knew the fires were smouldering beneath, but at the earnest solicitation of the editor of the NEW YORK MEDICAL JOURNAL I have consented to attempt to comply with his request, i. e., "we should like to publish an original communication showing what women physicians have accomplished since they first began the study of medicine." Being convinced that the editor had asked for more than he meant to, I tried to escape on the plea of the antiquity of women—a curious anomaly surely—in the medical world, but, being a true sportsman, the editor refused to let me off on any such excuse, and so the following account must be credited to its true origin and not blamed on the daughter of Eve who awards the apple.

In his essay on the history of medicine, Jurisconsult Tiraqueau says: "There have been a large number of physicians who have been numbered among the saints; several pontiffs, emperors, and kings have practised medicine; also queens and other women of quality," and at the conclusion of his essay he gives particulars of the standing of such persons as have been devoted to medicine, arranging the list in alphabetical order. To this interesting and instructive list those who are genuinely concerned as to the standing of the "antique women" in medicine are most cordially referred. For our purpose we may begin the narrative with the historic daughter of Aetes, King of Colchis,

who practised in her father's court, 1228 B. C., making a specialty of antidotes for poisons, which undoubtedly was one of the most important, if not the most important specialty of the age. Hygeia, later deified in Greece, was a daughter of Æsculapius and presided over the temple devoted to the sick at Epidaurus. So long as the practice of medicine formed a part of the priestly functions, as in ancient Egypt, the crafty guardians of superstition sedulously concealed their superior knowledge from the ignorant people. Yet there were priestesses in the Egyptian temples and the story of Moses shows that female gynecologists were not unknown to the Egyptians of his time. Coming down the centuries a little, an Athenian maiden, Agnodice, born 506 B. C., calls for special attention as an illustration of how curiously history sometimes repeats itself. Agnodice was very desirous of becoming a doctor, but even in those days there were obstructions, not dissimilar to those met by the women of later days whom we refer to as pioneers, such as Elizabeth Blackwell in America, Miss Jex Blake and Mrs. Garrett Anderson in England, and others. Agnodice, of Athens, was duly informed, and seemingly impressed, by the fact that her sex was an insuperable obstacle and, being unable to force her way into the medical profession of her native Athens, tried another plan. Artfully disguising her sex, she found no difficulty in being taught midwifery by a very eminent anatomist and physician of the day named Herophilus, but her story only begins with her success in gaining her education and the privilege of practice. Trusting in the loyalty of her sisters she is reported to "have whispered her secret to her shrinking patient" always when called to a case. That her confidence in women was not misplaced was speedily proved; her secret was kept inviolate and her practice grew with such astonishing rapidity that her confrères became jealous—verily; how history does repeat itself—and finally they accused her of corrupt practices and brought her to court. Agnodice had gained confidence with her success, she frankly revealed her sex to the Areopagus and it was promptly recognized as the reason for her large connection among women, who naturally preferred a woman near them at such a time. As a result of her trial, a law was immediately passed allowing all free born Athenian women to learn midwifery. So the battle was won in Athenian days.

Not all the women in medicine of antiquity were

of the type of Agnodice, however; one of the most distinguished, certainly the most infamous, and perhaps, therefore, the most famous woman of the ancient medical world was Cleopatra, Queen of Egypt, who lived about a half century before the Christian era. She was a most accomplished, a learned, and, according to accounts, a beautiful woman to whose toils of grace and attractions of person, Julius Cæsar, Mark Antony, and other men of her day fell easy victims. She is reported to have compounded cosmetics and to have written on the art of preserving beauty. Galen is authority for the fact that she wrote books on the diseases of women. At least she gave her name to them, and while it is probable that she wrote them, she declared in their prefaces that they were written by her sister Arsenoe—whom Antony, at his mistress's bidding, caused to be put to death. Be that as it may, the volumes have not come down to us and we cannot therefore judge of their professional value.

The medical school of Pythagoras was carried on, after his death, by his wife with the aid of her two sons, and she was the author of several medical treatises which were authoritative for many years. Pliny, in his natural history, mentions Olympias the Theban, a woman who was the author of many well known prescriptions; Salpe, another woman who wrote on remedies for the diseases of women, and Sotira, a woman to whom is attributed a prominent treatise on the treatment of fevers.

No fewer than four saints, who were also physicians and women, are mentioned as living before 500 A. D., and two of these, St. Zenais and St. Philomela lived in the first century. They were natives of Tarsus, but left their home and devoted their lives to medical science and the conversion of their patients to Christianity. They were kinswomen of St. Paul the Apostle; the tradition says that that chronic woman hater was always attended in his many illnesses by St. Zenais.

Galen mentions Antiochus especially, who lived in the second century and whose statue was found in the ancient town of Tlos in Asia Minor, bearing this inscription: "To Antiochus, daughter of Diodotos of Tlos, the council and commune of the town of Tlos, appreciating her medical skill, raised this statue to her at their own expense."

Among other medical women of early Christian times in Rome are found such as Aspasia, who as Herrgott points out, was the originator of podalic version, Theodosea, mother of St. Procopus, who practised general medicine and was executed about 312 A. D., and Fabiola, A. D. 380, a medical woman not lacking in analogy to Florence Nightingale, and the founder of hospitals in Italy, during the time of the Emperor Julian, to whom this honor is, therefore, usually credited. Speaking of medical women saints, it is not possible to omit mention of St. Hildegarde, who lived in Germany, 1098-1179, and of whom Herwegen gives an interesting characterization. She wrote two medical books, *Liber simplicæ medicinæ*, and *Liber compositæ medicinæ*. Schott, of Strassburg, in 1533, edited the first, under the title, *Physica St. Hildegardis*. This was discovered by Doctor Jessen in the library of Wolfenbuttel, and later he obtained from Copenhagen the manuscript entitled, *Hildegardis curæ et causæ*,

which he was convinced, after a careful examination, was the second medical work of the saint. It is in five books and treats of general divisions of created things; of the human body and its diseases; and of the causes, symptoms, and treatment of illnesses.

In Norse saga and Teutonic legend many women are celebrated as surgeons and physicians, and the parting gift recorded of the Queen given to Princess Ysolde, when she "leaves her native Ireland to become the wife of Cornwall's King," is a chest of drugs, philtres, and poisons; and it was Ysolde's fame as a physician which indirectly brought her to the attention of King Mark. Under Mohammedan rule, in the Middle Ages, women were placed in excessive isolation, and we find that several women were skilled in attending to the requirements of their sex. Albucasis, of Cordova, one of the most skillful surgeons of the twelfth century, secured the services of several women properly instructed as assistants and placed them in charge of operations on women, especially gynecological operations. Avicenna, writing of remedies for the eye diseases then so common, mentions a collyrium compounded by a "woman well versed in medical science." In Madrid in 1587 appeared a learned medical work entitled *Nueva Filosofía de la Naturaleza del Hombre* by a woman physician named Olivia del Sabuco.

The edict of the faculty of Paris, which forbade the practice of medicine to all who were not members of that body, to which only unmarried men were admitted, was such a dead issue as long ago as 1292, that eight women physicians were established in Paris at that time. The archives of Frankfort-on-Main mention fifteen women—three of whom were oculists—as established between the years 1389 and 1497. In the southern part of Italy, where Grecian influence was strongest in the Middle Ages, at Salerno, was founded the first medical school of modern times. Here the department of diseases of women was entirely handed over to women physicians, and we have a number of distinguished women professors who wrote textbooks, thought, and taught in the school. One of them, Trotula, was the author of a work entitled *De passionibus mulierum ante, in et post partum*, in which she describes perineorrhaphy and advocates its performance immediately after labor. She became famous all over Europe in her time. Among other Salernian medical women were Abella, Costanza Calendula, Mercieriade, author of several treatises, Rebecca Guarna, and Adelomota Maltraversa. Another Salernian woman physician of great prominence was Marguerite of Naples (or of Sicily), who was called to Poland and practised in the court of King Ladislaus (who died in 1414). Of this period of medical practice Doctor James J. Walsh has aptly said: "It would be easy to think that after all feminine education in medicine must have meant very little at this time, for the generation did not know much medicine. Anyone who thinks so, however, has the privilege of another thought after looking into the subject. That thought should come after due information. The surgery of Salerno particularly—and it is in this that most of us would be sure that the old times was very

backward—is an unending marvel. . . . The textbooks describe operations on the skull for tumor and abscess, on the thorax for fluid, on the abdomen for wounds of the intestines; they were treating hernias in the exaggerated Trendelenberg position and they had three methods of anesthesia, one of them by inhalation, and were using strong wine as an antiseptic and boasting of getting union by first intention."

In England, as long ago as the days of King Edgar (959-975), women were entitled by law to practise medicine, but in 1421 their male competitors petitioned Henry V, begging most piteously that women be not allowed to practise physic, and consequently the former laws were repealed, and we hear little more of medical women in England until Lady Anne Halkett (1622-1679).

After the so called Middle Ages the number of women physicians appears to have diminished everywhere, except in Italy where two women held professorships at the University of Bologna. One of the prosectors of Mondino, who is often called the Father of Modern Dissection, was a young woman, Alessandra Giliane, to whom must be credited the first attempts to inject anatomical specimens in order to preserve them. That her preparations might be more valuable and studied for a longer time, she colored the tissues variously, especially the arteries and veins. She died of blood poisoning, probably contracted in some accident in her carefully detailed dissection work. It is to another woman of Bologna, Anna Morandi Mazzolini, that must be credited the introduction of wax models into medical study, and she held the chair of anatomy at Bologna for nineteen years, and discovered the exact point of insertion of the oblique eye muscles, and though she received tempting offers from other Italian universities and even from England and Russia, she preferred to remain in her native city of Bologna. She enjoys the distinction of being the first "to reproduce in wax such minute portions of the human body as the capillary vessels and the nerves." Her collection of anatomical models is still to be seen at the Institute of Sciences. Contemporary with Anna Morandi Mazzolini was Laura Caterina Bassi, who studied physiology and medicine with Taccone, mathematics with Manfredi, and natural philosophy with disciples of Gassendi. She was appointed to the chair of physics and a medal was struck in her honor by the Senate. She held her professorship for twenty-eight years, marrying in the meantime a physician, J. J. Veratti, to whom she bore twelve children. She died in 1778 at the age of sixty-seven years.

In 1799, Maria Della Donne appears as professor of medicine and obstetrics at Bologna, and although a number of prominent women should be noted at other Italian universities throughout the Renaissance period, we have space to mention only a few. Dorotea Bocci (1436) succeeded her father in the chair of philosophy at Bologna, and also in the practice of medicine; Zaffira Ferretti, M. D., Marie Petruccini, Maria Sega, M. D., Novella Calderine, and Madalena Buonsignore should be mentioned among the numerous women graduates of Padua, Pavia, Ferrara, and other Italian universities. While women studied everything else at the Italian univer-

sities, as well as medicine, the custom evidently did not obtain in the north and west, apparently because Paris, whose influence meant so much to the others, was disturbed in its normal progress by the incident of Abélard and Héloïse. The doors of the Paris school of medicine remained closed after this until opened in 1867 by Mary Putnam, later famous as Dr. Mary Putnam Jacobi. The Italian universities were never closed to women and by state decree, in 1876, all of them (fifteen in number) were formally opened to them.

In England, as we have said, the earlier liberal laws were repealed in 1421, but women appear to have continued in the practice of midwifery and gradually to have acquired a certain amount of recognition in the medical field, because in the seventeenth century, Anna Wolley and Elizabeth of Kent were occupied with the preparation of drugs and each of them published works on medical subjects. About this time, too, Elizabeth Lawrence, wife of the Reverend S. Berry, of Bristol, was living and admirably instructed in anatomy and medicine.

In this century, Peter Chamberlain introduced midwifery forceps and their use required the calling of a trained physician by the midwives. We are told that the first personages of the land consulted Lady Anne Halkett (born 1622), at this time, who became celebrated both for her proficiency in the theory of medicine and her skill in surgery. She cared for the wounded after the battle of Dunbar (1650) and was thanked by the King. Her reputation spread and reached Holland where she was also in demand. A staunch loyalist, she, with her family, suffered much in the cause of Charles I, but, notwithstanding her practice of medicine, her fame, and her misfortunes, she found time to write and have published no fewer than twenty-one books. In 1642, women were licensed as midwives at Chirurgeon's Hall after they had passed three examinations, but later in the same century they were referred to the Doctor's Commons for their license and thus lost their official connection with the medical world. It is of interest, however, to note that Victoria was the first English queen to depart from the royal custom of employing women midwives. Her reason for so doing was a generous one; many women objected on religious and other grounds to the alleviation of labor pains by the use of chloroform, and the Queen decided to lend the weight of her example in favor of its use. As its administration required a fully qualified doctor, and there was none such among the women midwives of the day, Victoria departed from the time honored royal custom and employed a medical man.

By special decree of Frederick the Great, the University of Halle, in 1754, granted a medical degree to Frau Dorothea Erxleben—said to be the first in the history of any German university—and later Giessen granted degrees as doctor of obstetrics, in 1816, to Frau von Siebold, who officiated at the birth of Queen Victoria of England, and, in 1809, to Frau von Heidenreich, the daughter of Frau von Siebold. While women in medicine were wanting in France from the days of Héloïse to the present era (1867), there were two women workers in anatomy there and many midwives such as Louise Bourgeois, Marguerite de la Marche, Madame La Chapelle, and

Madame Boivin, who wrote extensively and after publishing a work on *Hydatid Mole* was made an honorary M. D. by the University of Marburg.

The Countess of Cinchona, a medical woman, wife of the Viceroy of Peru, will always be remembered as the introducer in 1640 of quinine for the treatment of malaria. And it was a Swiss woman, Madame de Hilden, who first removed a piece of steel from the eye by the use of a magnet, and she also planned many other operations whose technic is followed today. She assisted and advised and finally replaced her husband in his surgical work.

Turning to the American colonies, we should hardly expect to find women practitioners of much fame in a community where there were no medical colleges, and even the best of men were of little account prior to the Revolutionary War. Doctor Martha Wollstein says: "In the American colonies the history of medical women began deplorably, for it is recorded that the first person to be executed in the colony of Massachusetts Bay was one Margaret Jones, a female physician accused of witchcraft." Mayhap, however, the name Jones was too much for the unfortunate woman, or else Massachusetts became more tolerant later, for we find a woman practitioner obtaining fees, which must have been enormous for those days, if we are to believe the account book of one Reverend Timothy White, of Nantucket, who under date of June 21, 1749, writes: "Pd. to Mary Barnard, Doctr., £5 1s 8d, and for Physick then had 2 shillings." In the famous blue laws of Connecticut occurs the following entry under date of March, 1638: "Jane Hawkins, the wife of Richard Hawkins, had liberty till the beginning of the third month called May, and the Magistrates (if shee did not depart before) to dispose of her; and in the mean time shee is not to meddle in surgery or phisick, drinks, plaisters, or oyles, nor to question matters of religion, except with the Elders for satisfaction." On the other side of the picture in Connecticut we learn that the town of Torrington, in Litchfield county, had as early as 1773 two women, Mrs. Jacob Johnson and Mrs. Huldah Beach, who were greatly honored on account of their remarkable skill as accoucheuses. Mrs. Johnson, or Granny Johnson as she was called, "rode on horseback, keeping a horse for the special purpose, and travelling night and day, far and near," and was as thoroughly known and trusted as was ever any physician in the town. The celebrated Anne Hutchinson began her career as a midwife, and in the town records of Rehoboth is mentioned the arrival, on July 3, 1663, of Dr. Sam Fuller and his mother, he to practise medicine, she as midwife, "to answer to the town's necessity, which was great." Thomson's *History of Vermont* sketches the career of Mrs. Thomas Whitmore in the town of Marlboro, in 1765, who is described as being "possessed of a vigorous constitution and frequently travelling through the woods on snow shoes from one part of the town to another by night and by day, to relieve the distressed." "This sturdy woman," says Dr. Mary Putnam Jacobi, "lived to be eighty-seven years of age, an ironical comment on the theory of necessary deficiency of endurance in the female sex."

During the colonial period the medical profession of the country remained disorganized and there was

no effort made, for more than 150 years after the first settlement, toward improving the medical practice of the country or the education of physicians. Thatcher says: "No medical journal was published in America until toward the close of the eighteenth century. . . . The first anatomical dissection was made in New York in 1750." During the Revolution the medical conditions were shocking, but it served to bring the profession out of obscurity, encouraged and stimulated foreign travel for the purpose of study, and breathed into the American fraternity the first breath of medicine as a science. Dr. Mary Putnam Jacobi quotes from the *Remarks of a Boston Physician of 1820*: "It is one of the first and happiest fruits of improved medical education in America that females were excluded from practice." Verily again history repeats itself, even Boston history! Or can it be possible that there is something in the atmosphere of that Hub of the Universe which so distorts the masculine vision? Dr. James J. Walsh, of New York, has said: "Flinders Petrie, the great English Egyptologist, has suggested that there are seven great phases of culture in humanity in which men reached a climax of achievement and intellectual power and then decadence began. In each of these phases we are able to trace a significant development of feminine influence. . . . As women become interested in the intellectual life, they have been prone to withdraw more and more from the simple, natural, womanly duties which they must assume, or they will not be fulfilled. Only women can be mothers, and unless they are mothers the race does not go on. Whenever women have become much interested in the intellectual life, first, there has developed a sad disinclination to matrimony. Apparently, woman only needs to know man well not to think much of him. . . . Then the intellectual women who marry have ever smaller and smaller families." This reflection of Doctor Walsh's may serve as a partial excuse for the present day attitude of our "Boston brother," but it would hardly do for the Boston physician of 1820 when large families of children were still the rule throughout the country, the "bachelor maid" was as yet unheard of except under the less chivalric title of "old maid," and even the woman suffrage movement was in the germ. Incidentally Doctor Walsh's attention might be called—though the case may be an isolated one—to the family which Professor Laura Caterina Bassi bore to her medical husband, J. J. Veratti, in the eighteenth century (*vide supra*). "If this be treason!"—

Allow me a further quotation from Dr. Mary Putnam Jacobi: "A startlingly long step was taken at a stride, when, thirty years after the pæan of victory had been sounded over the complete suppression of female midwives, so that not even this corner of possible medicine might remain in possession of women—that then, half a dozen women, unknown to each other, and widely separated in this immense country, should appear almost simultaneously upon the scene and demand the opportunity to be educated as full physicians." Doctor Jacobi goes on to speak of these women. Harriet K. Hunt, of Boston, who, refused permission to attend lectures at Harvard in 1847, made a second application there in 1850, on which five out of the seven mem-

bers of the faculty voted "that Miss Hunt be admitted to the lectures on the usual terms, provided that her admission be not deemed inconsistent with the Statutes," and a week later the president and Fellows of the university announced that the statutes of the medical school offered no obstacle to the admission of female students. At a general student meeting, however, resolutions were adopted remonstrating against the "amalgamation of sexes and races"—a few colored students had been admitted at the beginning of the session—and the faculty, fearing, perhaps, that the majority of the students might withdraw to Yale, bowed to the storm and advised the "female student" to withdraw her petition, which she did. Thus we see another chivalric instance—and, strangely, again it is from so close to Boston—and the odd idea is advanced "that whenever a woman should prove herself capable of intellectual achievement this latter would cease to constitute an honor for the men who had previously prized it. Hence the urgent necessity of excluding women from all opportunity of trying." The Blackwell sisters were led to the study of medicine practically from economic reasons which compelled them to do something to earn their daily bread, and as Dr. Emily Blackwell subsequently explained, "We realized the infinite narrowness and pettiness of the avenues open to women and the crowds of competitors who kept each other down in the struggle. We determined that we would endeavor to open a new door and tread a fresh path rather than push for a footing in one already filled to overflowing." It was in 1845 that the plan of studying medicine became a settled resolution with Elizabeth Blackwell, and she was thus the real originator of the idea and movement in America. Marie Zakzewska, a young German woman and a favorite pupil of Doctor Schmidt, one of the State examiners of the Berlin School of Midwives, was the fourth woman of this group of the advance guard of women physicians in America, whither she came in 1853, and through the kindness of Elizabeth Blackwell learned English and secured admission to the medical school at Cleveland. After obtaining her degree she was associated for a time with the Blackwell sisters and then went to Boston, where she subsequently became identified with the second hospital in this country to be conducted by medical women, i. e., the New England Hospital founded in 1862. The fifth of this group of pioneers was Anne Preston, a Quaker lady of Philadelphia, who was identified with the movement to create a woman's medical college in Philadelphia, and the sixth annual announcement of the school mentions Doctor Preston as professor of physiology. Dr. Emmeline Cleveland, a graduate of this Philadelphia school, went to the Paris Maternité to fit herself to lecture upon obstetrics, thus repeating for the women, nearly a century later, the careers of Dr. James Lloyd, of Boston, and Doctor Shippen, of Philadelphia (in 1752 and 1762 respectively), who went to England to obtain knowledge from which to lecture on obstetrics and returned to organize the science for the men of the colonial medical profession. The sixth of this pioneer group, Sarah Adamson (the second woman in the United States to receive a medical diploma), married one year after her graduation a Doctor Dolley, of Rochester, N. Y.,

in which city she at once settled and practised successfully for thirty-eight years, from 1852 till 1890, after which she retired. Doctor Dolley, like the Blackwell sisters, died only within the last few years, much beloved and honored by the women who have followed in the path they blazed so ably and at such great personal cost.

It is not possible in an article such as this to give a history of all these splendid pioneer women and what they have accomplished. Many abler pens have written the histories of their lives, which to a great extent were paralleled a few years later in England. The story is perhaps most briefly told by Dr. Martha Wollstein, from whom I cite many of the following facts: "The history of women in medicine since 1849, when Dr. Elizabeth Blackwell graduated at Hobart College, Geneva, is a familiar tale that cannot be told too often. How she was refused permission to study at all colleges in Philadelphia and New York, until finally the faculty at Geneva put the matter before the student body, and they voted to extend their unanimous invitation to her to become a member of their class" (shades of chivalric Boston, what is this!) Dr. Emily Blackwell has ably told the story of how she graduated at Cleveland after having been debarred from taking her second term at the Rush Medical College, Chicago, how the New York Infirmary was established in 1854-1857 with a dispensary and twelve beds for poor lying-in women and how the Woman's College of New York Infirmary was opened in 1865. "Of its close in 1899, when Cornell opened its medical course to women, we can only speak with regret." The Woman's Medical College of Pennsylvania had been founded fifteen years earlier, and was the first college in the world for the medical education of women. The Woman's Hospital in Philadelphia was founded in 1861, and in 1895 the hospital and dispensary of the alumnae of the Woman's Medical College of Pennsylvania was opened, thus making of the proverbially slow Philadelphia a city sufficiently alert and progressive to be able to lay claim to the unique distinction of being the only one able to boast of two hospitals founded and run by medical women. In Chicago, in 1865, the Women's Hospital was founded under the guidance of Dr. Mary Thompson, and the Women's College followed in 1869, becoming in 1891 an integral part of Northwestern University. The fifth hospital run by women physicians, the Hospital for Sick Children and Women, was opened in 1875 in San Francisco, and the sixth is Northwestern Hospital in Minneapolis. New York and Boston each boast of a homeopathic medical school founded in 1863 (by Dr. Clemence Lozier) and 1874 respectively. With the opening of the State universities to women, beginning with the University of California, in 1869, and followed by every western State university, the necessity for special medical colleges ceased in the west, but in the east, excepting only Johns Hopkins (1893), Cornell (1899), Pennsylvania (1915), and Columbia (1916), no university of the first grade admits women to its medical school. Johns Hopkins, Cornell, the universities of Rochester, of Buffalo, Iowa, Illinois, Michigan, Minnesota, McGill, Edinburgh, Glasgow, Sidney, Adelaide, Stockholm, Paris, and Rouen have all had, or at present have

medical women in official teaching positions in their medical schools. New York University and Bellevue Medical College have for four years had two women as special lecturers to the undergraduates, which same women, this year (1916), held in addition salaried positions as lecturers to postgraduate students of the medical college.

Dr. Mary Putnam Jacobi was appointed clinical lecturer in children's diseases at the Post-Graduate Medical School in 1882, "the first time in this country that a lectureship in a masculine school was held by a woman." Dr. Sarah J. MacNutt was also a lecturer in diseases of children, and Dr. Grace Peckham Murray was professor of gynecology there. At the New York Polyclinic Hospital Dr. Rosalie Slaughter Morton has recently been made associate professor of gynecology with a staff of four medical women assistants. On the whole, however, there have been few opportunities for teaching open to the medical women outside of the special medical schools for women.

Mary Putnam—later Dr. Mary Putnam Jacobi—reopened to women the *Ecole de médecine* in Paris in 1867 and she and Miss Elizabeth Garrett—later Mrs. Garrett Anderson, M. D., dean of the London Medical School for Women—graduated there in 1871 and 1870 respectively. Miss Garrett was already registered as a licentiate of Apothecaries' Hall, London, since 1865, but at that time it seemed hopeless to obtain a medical degree from any of the British examining bodies, and so Miss Garrett had decided to study abroad. Elizabeth Blackwell had in the meantime been registered in London, in 1858, the first medical woman on the British register, and a group of plucky British women under the inspiration of Dr. Sophia Jex Blake were struggling to obtain a medical education in Scotland. Five women, Miss Sophia Jex-Blake, Mrs. Thome, Miss Pechey, Mrs. DeLacy Evans, and Miss Chaplin were trying to enter the medical class in Edinburgh University, and were joined by two more women, this group ultimately becoming known as the *Septem contra Edinam*.

In 1876 Dr. Sara H. Stevenson was admitted to the American Medical Association, the first woman to whom that national body of medical men opened their doors. Dr. Mary Putnam Jacobi had already, four years previously, gained recognition as a member of the New York County Medical Society, and in time she opened also the doors of other New York medical societies, such as the New York Academy of Medicine, New York Pathological Society, New York Neurological Society, etc., and, in 1874, she was a delegate to the New York State Medical Society. Dr. Garrett-Anderson was the first to obtain entrance to the British Medical Association and so on until general recognition and almost universal membership is accorded the women at the present time in every medical society or medical congress worthy of the name. A few special societies still hold to the narrow tendency of sex differentiation, but their influence is negative and their example generally looked upon with disfavor by the medical profession as a whole, which has recognized the ability of medical women.

(To be concluded.)

MEDICAL WOMEN,

In History and in Present Day Practice,

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(Concluded from page 198.)

In a recent book on English medical women, Miss A. H. Bennett, who, by the way, is not a medical woman, but a journalist, writes:

It was the first five ladies who made a fresh application¹ for admittance to Edinburgh University, which was received quite favorably by the Senatus and the University Court. Doubtless it was easier to admit these "blue stocking" ladies than to refuse them. . . . Besides, there was the safeguard of the General Council of the University, whose assent was necessary before arrangements could be made for their admittance. The meeting of the council took place a few days before the winter session, and some time after the examination by which alone the medical students could gain entrance to the university for that term. Another visit was therefore paid to the dean of the medical faculty, who, as a great concession, allowed the ladies to present themselves for matriculation on condition that the examination should be considered void if the council decided not to admit women to the university. . . . The motion of Professor Mason, seconded by Professor Hughes Bennett, that "women be allowed to matriculate and form separate classes," passed by a large majority. The university felt that by this vote it had shown great breadth of mind, and such generosity that now it might at least make the affair a paying one. Consequently, the ladies were left to make their own arrangements for the separate classes, and for each class a guarantee of a hundred guineas was demanded. This the women agreed to, and received their precious cards proclaiming in red letters that they were *Cives academiae edinensis*. . . . And now trouble began. After the first examination it was found that Miss Pechey had taken such a high place in chemistry that it was possible and even probable that she might win one of the Hope scholarships. This, from the men's point of view, was quite unendurable. They had gone against their traditions and upbringing in admitting the ladies to the classes, and the ladies, instead of showing gratitude by remaining in the background, not only competed with their best men, but seemed quite likely to win. . . . The two examinations resulted in four fifths of the women being in the honors list, Miss Pechey proving herself the best student of chemistry in her year. . . . The professor

¹Miss Jex-Blake in a previous application, had been refused on the ground of its "not being advisable for the university to make alterations in the interests of one lady."

(Crum Brown) announced that the man below Miss Pechey would receive the scholarship, as the women's class was not eligible. Instead of meekly accepting the decision, Miss Pechey appealed to the Senatus. It was all very annoying and disturbing, and quite contrary to the professor's idea of womanly behavior, but, to his relief, the Senatus upheld his decision. . . . The excitement spread, and all forces of society, including the daily papers, were engaged in the struggle for or against the ladies. . . . As one of the friendly professors pathetically remarked at the time, if they would only be content to keep in the background, work on unobtrusively, lay claim to no distinction, and avoid all rivalry with the students, so much jealousy and trouble would be prevented. In other words, if these exceptionally brilliant women were to gauge the capacity of the men students, and then carefully refrain from doing better than the most stupid, they might be treated with kindly condescension.

Doctor Wollstein sums up the subsequent history: "After the first session the professors refused to teach the women and the male students mobbed them. An appeal to the courts and even the parliament resulted"—after the second year—"in defeat of the women, who were obliged to go to Switzerland for their degrees." In 1874 the idea of founding a medical school for women in London took shape, Dr. Jex-Blake being chiefly instrumental in the school's organization. All obstacles were finally overcome when the Royal Free Hospital opened its wards to the women and the University of London, and the Conjoint Irish Boards consented to grant examinations and degrees to women. In 1886 a separate school for women was successfully opened in Edinburgh, and Dr. Jex-Blake was the first woman appointed as lecturer in a British university, holding the extramural lectureship in midwifery at Edinburgh and later at St. Andrews.

It would take too much space and be rather bore-some to enumerate all the historical steps by which women have impressed their fitness and ability to practise medicine upon the general public, the hospitals, and colleges until in 1908, fifty per cent. of all the medical schools of the United States were granting degrees to women and every English university (except Oxford and Cambridge), all the Scotch universities, the Royal University of Ireland and Trinity College, Dublin, and the University College at Cardiff were open as well. Doctor Wollstein summarized the situation in 1908 most ably: "A fairly complete list would read as follows: The admission to medical degrees having been accomplished, first, in the United States in 1859, Switzerland followed in 1864, France in 1867, Sweden in 1870, Holland in 1873, England in 1877, Denmark in 1875, Italy in 1876, St. Petersburg in 1878, Finland in 1879, Scotland in 1886, Belgium in 1890, then Portugal, Bulgaria, Roumania, Greece and Mexico, then Austria in 1897, and finally Germany in 1900."

It is from lack of adequate hospital opportunities and staff appointments that women suffer most at present, though the outlook in the country at large is better today than it was even eight years ago. In the east these opportunities are still unjustly limited, as are also the appointments to teaching positions in the medical faculties. This discrimination can hardly be laid at the doors of the incompetency of the medical women with any degree of justice, and it is to be hoped that an adjustment may soon be reached whereby the women are appointed to faculty

and to hospital staff in a fairly just proportion to their relative numbers in the profession.

According to the twelfth census of 1910 the number of males in the United States who were gainfully employed was 22,489,425; of females gainfully employed, there were 4,833,630. Of these, 124,615 males and 7,387 females were returned as physicians and surgeons; in other words, there was about one medical man to every 179 men in other occupations and about one medical woman to every 653 women in other employments, whereas the proportion of women to men in the medical profession was about one to sixteen and of women to men gainfully employed about one to five, and the proportion of women to men in the population was about one to one, there being 24,851,013 males and 23,485,559 females in the census area of the United States who were sixteen years of age or older. To put these figures in another form: Of the males old enough to work, 90.5 per cent. were breadwinners; of the females, 20.6 per cent. Of the male breadwinners about 0.6 per cent. were physicians and surgeons; of the female breadwinners about 0.2 per cent. were physicians and surgeons; and of the whole number of the medical profession, 5.6 per cent. were women.

The history of medicine, having never been without the names of women practitioners for any appreciable time, goes far to prove that their medical work and medical writings were of average merit to say the least. That women are particularly adapted to the detail work required by laboratory research will be readily admitted and is amply demonstrated by the success in this field not only of a large number of nonmedical women, trained in other sciences or in specific lines of laboratory work, but also by the contributions of such medical women of the present generation as Frau Lydia Rabinovitch-Kempner, Frau Vogt, and Dr. Rachel Hirsch, of Berlin; Madame Curie, Madame Klumpke-Déjérine, and Madame Metchnikoff, of Paris; Dr. Lilian Welsh and Dr. Florence R. Sabin, of Baltimore, Md.; Dr. Janet Lane-Clayton, Dr. Ida S. MacLean, and Dr. A. Louise McIlray, of London, England; Dr. Marie Kjöiset, of Christiania, Norway; of Dr. Lilian South (lately vice-president of the American Medical Association), of Bowling Green, Ky.; of Dr. Harriet F. Holmes, Dr. Lydia M. De Witt, and Dr. Gladys R. Henry, of Chicago, Ill.; of Dr. Martha Wollstein, Dr. Phebe L. DuBois, Dr. Louise Pearce, Dr. Anna I. von Sholly, Dr. Eleanor E. N. Van Alstyne, Dr. Bertha Van H. Anthony, Dr. Jacolyn Van Vliet Manning, and Dr. Anna W. Williams, all of New York, Dr. Adelaide W. Peckham, of Philadelphia, Pa., and others too numerous to mention.

In social service—which a Boston confrère considers the field *par excellence* for women—we find such well known women as Dr. S. Josephine Baker, director Child Hygiene Department of the New York city board of health; Dr. Frances Bradley, formerly of Atlanta, Ga., now in Government service in the Children's Bureau, Washington, D. C.; Dr. Janet Lane-Clayton, of London, England; Dr. Helen Y. Campbell, of Glasgow, Scotland; Dr. Lenna L. Meanes, of Des Moines, Iowa; Dr. Helen C.

Putnam, of Providence, R. I., and Dr. Evangeline Young, of Boston, Mass., are all well known for work in infant welfare; Dr. Alice Hamilton, of Chicago, had made researches in occupational disease and with flies and typhoid, that were epoch making, and Dr. Caroline Hedger's (also of Chicago) work in the stockyards was a wonderful contribution to preventive medicine. Other women are entitled to credit in this field of service, especially the host of them who have ably cooperated in the campaign of public health education inaugurated in 1909 by the American Medical Association, but to enumerate them would need a volume, and this gratuitous philanthropic work was done by them as an incident to their scientific medical work and not as a specific field of service.

A brief and very incomplete list of the women entitled to be called well known in their specialties is herewith appended:

Internists.—The late Mary Putnam Jacobi, Elizabeth Cushier, Helen Baldwin, Sara J. McNutt, Emily C. Charles, of New York city; Eliza M. Mosher, of Brooklyn, N. Y.; Marion Craig Potter, of Rochester, N. Y.; Julia G. McNutt, of Albany, N. Y.; Sara M. Edwards, of Newark, N. J.; Ella Prentice Upham, of Asbury Park, N. J.; Evangeline W. Young, of Boston, Mass.; Kate Campbell Mead, of Middletown, Conn.; Mary B. Jewett, formerly of New York city, now of Florida; Mary Taylor Bissell, of New York; A. Louise McIlray, of London, England; Frances Culbert Van Gasken, of Philadelphia, Pa.; Sara A. Bond, of Boston; Josephine Beede, of Boston; Mary Hobart, of Boston; Emma Call, of Boston; Blanche A. Denig, of Boston; Hu King Eng, Mary Stone, of China.

Gynecology and obstetrics.—Anna E. Broomall, Ella B. Everitt, of Philadelphia, Pa.; Alice Weld Tallant, of Philadelphia, Pa.; Mary Gage Day, of Kingston, N. Y.; Elizabeth Jarrett, of New York city; Sara J. McNutt, of New York city; Rosalie Slaughter Morton, of New York city; Anna M. Galbraith, of New York city; Grace Peckham Murray, of New York city; Clelia Duel Mosher, of San Francisco, Cal.; Florence N. Ward, of San Francisco, Cal.; Bertha Van Hoosen, of Chicago, Ill.; Miss Janet Campbell, of Liverpool, England; Dr. A. Louise McIlray, of London, England; Dr. Annie McCall, of London, England; Mrs. Ethel Vaughan-Sawyer, of London, England; M. Marie Knudson, of Boston, Mass.; Marian Nute, of Boston, Mass.; Hannah G. Myrick, of Boston, Mass.; Rosetta Sherwood Hall, of Korea.

Pediatrics.—The late Dr. Mary Putnam Jacobi, of New York city; Sara Welt-Kakels, of New York city; Annie S. Daniel, of New York city; Mary Fulton, of China; Emelyn S. Coolidge, of New York city; Lenna L. Meanes, of Des Moines, Iowa; Millicent M. A. Cosgrave, of San Francisco, Cal.; Alice E. Sanderson, of London, England; Eleanor C. Jones, of Philadelphia, Pa.; Louise Taylor Jones, of Washington, D. C.; Annie Lee Hamilton, of Boston, Mass.; Beth Vincent, of Boston, Mass.

Surgery.—Adelaide Brown, of San Francisco, Cal.; Emily Dunning Barringer, of New York city; Rosalie Slaughter Morton, of New York city; Alice Gregory, of New York city; Elizabeth Hamilton Muncie, of New York city (Brooklyn); Late Rose Talbot Bullard, of Los Angeles, Cal. (died Dec. 22, 1915); Bertha Van Hoosen, of Chicago, Ill.; Martha Welpton, of Des Moines, Iowa; Miss Janet Campbell, of Liverpool, England; Mary de Garis, of Melbourne, Australia; Louise Garrett Anderson, of London, England; Florence Stoney, of London, England; Mrs. Mary A. Scharlieb, of London, England; Miss Aldrich Blake, of London, England; Caroline M. Purnell, of Philadelphia; Mary A. Smith, of Boston; Elizabeth T. Gray, of Boston; Augusta Williams, of Boston; Jane Kelly Sabine, of Boston; Emma B. Culbertson, of Boston; Sarah E. Palmer, of Boston; Florence Duckering, of Boston; Mary W. Haskins, of Detroit, Mich.; Elizabeth Reifsnnyder, of Northern China.

Mental and nervous diseases.—Maria Montessori, of Rome, Italy; Helen Boyle, of Brighton, England; Helen

MacMurchy, of Toronto, Canada; Helen Kuhlman, of Buffalo, New York; Mary Lawson Neff, of New York city; Isabelle Thompson Smart, of New York city; Harriet C. B. Alexander, of Chicago, Ill.; Eleanor S. Everhard, of Dayton, Ohio; Gertrude Felker, of Dayton, Ohio; Mabel D. Ordway, of Boston, Mass.; Edith R. Spaulding, of Boston, Mass.; Mme. Klumpke-Déjérine, of Paris, France.

Orthopedic surgery.—Frau Grete Schuler-Helbing, of Berlin, Germany; Matilda K. Wallin, of New York city; Mary Hess Brown, of New York city.

Anesthesia.—Bertha Van Hoosen, of Chicago, Ill.; Mary Dickinson Berry, of London, England.

Electrotherapy.—Mary Arnold Snow, of New York city; Margaret Cleaves, of New York city; Gladys L. Carr, of Boston, Mass.

Specialists in diseases of eye, ear, nose, and throat.—Elizabeth, Queen of the Belgians; Late Emma E. Musson, of Philadelphia, Pa. (died Dec. 28, 1913); Mary P. Eddy, of Sidon, Syria; L. Rosa H. Gantt, of Spartanburg, S. C.; Helen Cooley Palmer, of Los Angeles, Cal.; Maud Carvill, of Boston, Mass.; Margaret Noyes, of Boston; Louisa P. Tingley, of Boston; Isabella D. Kerr, of Boston; Alice E. Wakefield, of New York city; Laura E. Hunt, of Philadelphia, Pa.

Dermatology.—Daisy M. Orleman-Robinson, of New York city.

Gastroenteric diseases.—Mary Dunning Rose, of New York city.

Cardiac diseases.—Maude E. Abbott, of Montreal, Canada.

Tuberculosis.—Mary P. Eddy, of Sidon, Syria; Mary E. Lapham, of Highlands, N. C.; Evelyn Fisher Frisbee, of Albuquerque, N. M.; Lydia Rabinowitsch, of Berlin, Germany.

This would hardly suggest that the sphere of woman's work in medicine is limited today; these medical practitioners are all recognized by the profession locally, many of them are known in all parts of the country, some even internationally, all have made and published original contributions to the medical literature of the day, much of this original work being of intrinsic and permanent value, so far as anything in medical science is really permanent. Practically no mention has been made of the host of medical women missionaries, whose stupendous medical work and well earned fame deserve an article devoted entirely to its consideration; it could not be at all adequately handled here.

Thus we may summarize the answer to "What have women accomplished in medicine since they began its practice?" by the statements: 1. They have made a large proportion of permanent contributions to medical science, especially if we take into consideration the fact that historically they have always been in a minority in the profession; and, 2, repeatedly crowded back and even out of the profession by the aggressiveness and numbers of their medical brethren, they have as repeatedly—and let us hope at last permanently—proved their ability to compete on equal terms with a fair degree of success and at least an average proportion of scientific achievement of the first rank. They have done this in spite of a most obstinate spirit of opposition on the part of their medical brethren; in spite of the seemingly insurmountable obstacles placed in their path by dogged masculine determination. Their courage has been dauntless; each attack more determined than those preceding, and actuated by the keenest sense of justice and of fair play.

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