

# Pioneer Women in Medicine

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IT is less than one hundred years since women asked for entrance to established medical schools in order to receive the same training as men, to sit for the same examinations that would qualify them for the Medical Register. Yet as a matter of fact, for hundreds of years women without the benefit of academic training had nursed the sick and prescribed various remedies for their ailments. Some of the herbs first used in this way, digitalis for example, have proved of great value. Children were helped into the world, even the royal heirs to thrones by women. Many of these midwives during the seventeenth and eighteenth centuries became famous for their originality in the field of obstetrics. On the continent these women were often treated as the social equal of physicians and even honored with degrees.

Some human functions and natural events, such as birth, were considered so indecent that books on the subject of obstetrics were not written. The majority of women were totally ignorant of normal physiological functions and so hesitant about consulting male physicians that they preferred to suffer and in some instances die because of their modesty. Before relating the modern struggle of women for recognition in the medical field, it may be of interest to recall the names of a few women who in earlier times became known for their work in some branch of medicine. This, however, is not an inclusive list—Agnodice an Athenian maiden, had such skill in healing that the practice of medicine was legally opened to all free-born women of the state. In Italy Trotula, a woman professor at Salerno in the 11th century and Abella in the 14th century were noted for their practical teachings in obstetrics.

Bologna Italy was a famous medical center especially for the teaching of anatomy. It was here that Mundinus in 1315 published an anatomy based upon the dissection of three human bodies, the first advance in anatomy since the second century. In the 16th century Alessandra Gigliani taught anatomy at Bologna and Laura Bassa in 1771 received the degree of Doctor of Medicine. Anna Mazzolini, the wife of an anatomist assumed his duties when he became incapacitated by illness. She made exquisite anatomical models that were greatly admired and which formed the basis for the first anatomical museum at Milan. Here Anna Mazzolini died in 1774. Maria Petraccini was given a degree at Florence in 1788 and then lectured on anatomy at Ferrara. Her daughter Zafurra Ferretti studied surgery at Bologna and graduated in 1800. She was director general of midwives until her death in 1817.

In France women practiced healing as well as mid-wifery. Louis IV on one crusade was accompanied by a woman doctor. In November 1311, Phillip, the Fair, put men and women on the same footing when in a decree he forbade any surgeon man or woman to practice in Paris unless he or she had been carefully examined and approved by the sworn master surgeon.

Germany gave degrees to a few women in the eighteenth and early part of the 19th centuries. Frau Dorothea Christina Erxleben, the daughter of a medical practitioner of Quedlinburg received the degree of Doctor of Medicine in the University of Halle on June 12, 1754 after a two hour examination con-



ducted in Latin. Frau von Siebold was granted a degree from the University of Giessen as a recognition of merit. Her daughter Charlotte studied at Göttingen in 1811-12 and graduated at Giessen in 1817. From Giessen also Frau Theresa Frei received the degree of Doctor of Obstetric Medicine in 1847.

Women in Great Britain were commonly found among the irregular practitioners. A petition against women using *fisyk* was presented to Henry V in 1421. Lady Ann Halket born in 1622, a daughter of the Provost of Eton College was so noted for her skill that she was consulted by persons of the greatest quality. Women shared in the privileges of the Irish Guild of Barber Surgeons established in 1446. Practically all obstetrical cases were attended by women until obstetrical forceps were invented by Peter Chamberlen.

The real pioneer in the modern movement was Elizabeth Blackwell who was born in England but educated in America. Her sister Emily joined her a few years later. At this same time a Quaker woman Ann Preston was pioneering in the establishment of a Women's Medical School in Philadelphia. Elizabeth Blackwell was the first woman in the United States to receive a medical degree upon completion of a prescribed medical course and she likewise was the first woman to obtain a place on the English Medical Register. She helped to provide medical education for women both in the United States and in England. Through her lectures while on a trip to England, Elizabeth Garrett, the first woman in England to qualify for practice, was inspired to study medicine. Sophia Jex-Blake another English woman also came under her influence and eventually these three, Elizabeth Blackwell, Elizabeth Garrett and Sophia Jex-Blake provided a way for women in England to receive medical training.

Elizabeth Blackwell was born at Counterslip Bristol, February 3rd, 1821. The third daughter of Samuel Blackwell, a sugar refiner who after commercial losses emigrated to America in 1832 and took his family with him. When he died 6 years later (1838) Elizabeth who was now 17 with her two older sisters opened a school in Cincinnati in order to support the mother and younger children. The eldest brother in 1842 made a business connection that relieved the sisters of some responsibility but Elizabeth continued to teach music with the definite intention of obtaining funds to study medicine.

Her idea of a medical career is said to have had its origin in the statement of a sick female friend that the sufferings of many women were increased by the necessity of receiving medical attention at the hands of a male advisor. For three years while she taught music at Charleston, Elizabeth studied privately under a Dr. Dickson so that she could claim some experience when applying for entrance to a medical school. She also had private lessons in anatomy and midwifery conducted for her by two medical men in Philadelphia.

After 12 American medical schools had refused to consider her applications, in October 1847 she was finally admitted to a school in Geneva, New York, now Hobart College but its medical course has been transferred to Syracuse University. The admittance of a woman to the class was decided by a vote of the male members who in this instance voted 'yes'. At this time, Elizabeth was dainty, dignified, entirely feminine, and made a good impression. It is just possible that the male students thought the classes in medical school would soon become unbearable for a woman and she would leave. However, Elizabeth studied there two years, went to Blockley Almshouse in Philadelphia during vacations for clinical work and graduated with the coveted M.D. degree in January 1849 at the age of 28.

To continue her studies she went to England but could find there in the



hospitals no opportunities for a woman. She went on to Paris where she worked a year and a half at the Maternite and Hotel Dieu Hospitals. As a result of an eye infection contracted in the wards, she lost the sight of one eye and this misfortune caused her to give up any idea of entering surgery. Upon her return to England in 1850, she was able through the influence of Sir James Paget, dean of the School to work at St. Bartholomiew's Hospital.

After two years of study abroad she returned to the United States to open an office in New York City where, after a slow beginning, she built up a lucrative practice among women and children. Meantime her sister Emily sought admission to the Medical school at Geneva and was refused. She studied one year at Rush Medical School, Chicago and then was not permitted to continue the second term because the State Medical Society had censored the college for admitting a woman. Emily graduated from a college in Celveland, Ohio in 1852 and went to Scotland where she studied under Sir James Simpson who gave her a certificate of proficiency. In 1854 the two sisters opened a dispensary which later developed into the New York Hospital for Women and Children.

A medical Act was passed in England in 1858 which permitted registration of physicians who were in practice and had obtained a degree from a recognized medical school. It declared hereafter only British licenses, diplomas and degrees can claim registration and that without registration no practitioner can be considered as legally qualified. Dr. Elizabeth went to England that year and while there through the insistance of friends she asked for and as a graduate prior to 1858 was entered upon the Medical Register. Before she returned to America she delivered lectures in London, Leeds, Birmingham, Manchester and Liverpool on Medicine as a Profession for Women.

During the American Civil War she arranged for the nursing of the wounded and was instrumental in organizing the Ladies Sanitary Aid Association. When in 1864 the Medical School for Women was founded in New York City, she became professor of hygiene. This school graduated its first class in 1870 and by 1873 had 100 alumnae. In 1874 she was appointed to the chair of gynecology in the London School of Medicine for Women.—the school which finally won recognition for women in England—but that story will be taken up later.

Among her numerous writings is a book titled "Pioneer Work in Opening the Medical Profession to Women". To quote from an obituary "She lived to see many of her views which had been scouted when uttered by herself and some others a half century previously accepted as the commonplaces of social policy". She died at Hastings on May 31, 1910 at the age of 90, clear in mind to the end. A tablet to her memory was unveiled in Exmouth Place, Hastings on June 7th, 1914.

The same year that Elizabeth Blackwell entered medical college, a Miss Harriet Hunt who had been practicing in Boston for several years was refused entrance to Harvard. Again in 1850 she sought admission and five of the seven professors voted "That female students be admitted to the lectures". When the male students learned of this, they objected so violently that Miss Hunt was asked to withdraw her petition. She continued her private practice unsanctioned by law for more than twenty-five years and Harvard has never admitted a woman as a medical student although Alice Hamilton has lectured there on Industrial Diseases.

A fragile Quakeress of Pennsylvania Ann Preston who decided that the study of medicine was both "right and womanly" became another pioneer in



medical education for women. Born in West Grove, Chester County Pennsylvania in December 1813, the only daughter of a minister, her education was obtained at a district school supplemented by reading and private study. As her mother was delicate and there were 6 boys in the family, Ann early carried heavy responsibilities. She loved the beauty of nature and put her thoughts and emotions into poetry. In 1848 she published a volume of poems for children entitled "Cousin Ann's Stories" which were intended to convey moral lessons. Ann Preston was interested in such unpopular causes as abolition of slavery and prohibition. One story is told about a run away slave hidden in the house on a Sabbath. The other members of the family were away and when a neighbor came by to warn her that searchers were coming, she said "What must I do" and he replied "I can not stop to advise as I must hurry on to warn the others". She dressed the slave in her mother's clothes, adding the heavy veil that Quaker women wore, and hitching the horse to the buggy started out toward town, the direction from which the searchers were coming. The searchers looked in the buggy saw two women going to church, and did not question them.

Founded by a number of well known medical men and prominent women in Philadelphia including Ann Preston, the Female Medical College of Pennsylvania was opened March 11, 1850. The first class of 8 students of which Ann was one was graduated in December 1851. However, she felt that her training was not sufficient and remained at the college for continued study. In 1853 she became professor of physiology and gave extra-curricular lectures on hygiene and physiology to women in New York, Baltimore, Philadelphia and many smaller towns. Poor health prevented her acceptance of night calls or obstetrical cases and finally she became restricted to office practice.

Students at the college were frequently insulted in the hospitals and so intense was the feeling of the profession against physicians who were willing to accept professorships in the school that it was difficult to obtain good teachers. Dr. Preston devoted much energy in an endeavor to establish a hospital that would provide clinical instruction, the lack of which she recognized as a big factor against the success of the college. She chaperoned the students to Blockley Almshouse until 1862 when as a result of her efforts The Women's Hospital of Philadelphia was chartered for clinical teaching. Five years later the Female Medical College of Philadelphia became The Women's Medical College of Pennsylvania with Dr. Preston as dean. On January 2, 1869 the Philadelphia Hospital was opened to women and on November 6th of the same year the Pennsylvania Hospital gave permission for the attendance of women students at clinical lectures. A new hospital was erected in 1907—chartered as The Alumnae Hospital and Dispensary of the Women's Medical College of Pennsylvania. Dr. Preston remained dean of the college from 1866 to her death in 1873. She has been described as "That frail and friendly form, that Quaker poet and prophet with her quiet spirit, represented a force and influence worth a regiment of men".

Of all the schools opened in the United States for the exclusive training of women, The Women's Medical College of Pennsylvania, now 91 years old is the only one that remains. It has a high standard. A graded course of study was established in 1869 ante dating both Harvard and the University of Pennsylvania. In 1869 Michigan and California became co-educational and now 75 schools are open to women. Only 6 schools, Harvard, Georgetown—Washington, D.C. St. Louis University Medical School, Hahneman, N.Y.



Jefferson in Pennsylvania and Emory, Ga., in the United States and one in Canada, (Queens) refuse women students.

After women obtained a medical education in the United States they struggled for professional recognition from Medical Association. Dr. Martha Tracy in an address delivered in 1926 says: "The history of the struggle for recognition reads like an absurd tale out of the dim past; the successful issue was not obtained in the American Medical Association until 1876 and in the Philadelphia County Medical Society not until 1888—thirty-six years after the first class graduated". Dean Tracy goes on to say that "The establishment of a medical school for women in 1850 was not by "chance" nor by the mere whim of an enthusiastic feminist, but the logical outcome of the social, economic and educational revolution which has been part of the greater so called "woman movement" of the past 125 years".

In England the feminist movement was taking form from 1836 to 70. Women supported by some fair minded men were struggling to get laws enacted that would give them rights over property and custody of children. At this time women lacked facilities for education, could not secure training that would enable them to earn a living and were considered mentally inferior to men with no rights of citizenship except the right to pay taxes. It was during and as part of this movement that the first women in Great Britain entered upon the study of medicine. The seed was sown by Dr. Elizabeth Blackwell, nurtured by Sarah Emily Davies and others interested in the progress of women. Money for fees and lawsuits came likewise from those determined to see the cause succeed. This might be called the "era of feminine revolt and revolution".

Elizabeth Garrett was the first woman in Great Britain to obtain a license to practice and the second woman to be admitted to the British Register, qualifying in 1865. She was born on June 9, 1836 in London and when 4 went with her parents to Aldeburgh on the coast of Suffolk. Her father, though not well educated himself insisted upon giving his children both girls and boys an education. Fortunately he prospered in business and was able to finance Elizabeth during the years she studied medicine.

Until the age of thirteen Elizabeth and her older sister Louie were taught at home, then the two girls were sent away to a boarding school kept by Miss Browning, an aunt of the poet. After two years in this school, the girls returned home with a French vocabulary and bad pronunciation. However, they made friends who influenced their later lives. They took an active interest in public affairs and developed a desire to help other women. At the age of 21 Elizabeth taught the younger children in the family and studied Latin and arithmetic under a tutor who was coaching her brother for the army.

Her older sister married in 1857 and went to London to live, Elizabeth visited her and met there a circle of young people who had brains, education and money. These young people often debated about the position of women and believed that women should have a chance to work and earn enough money to maintain themselves, to acquire the same technical education in a profession or trade as a man.

Elizabeth Garrett met Dr. Blackwell in London personally in 1858 and attended three lectures on "Medicine as a Profession for Ladies". Her interest in the subject was aroused and the necessary impetus was provided by Emily Davies who decided that Elizabeth now 23, in excellent health, friendly, not eccentric in any way, was the ideal pioneer. The plan was opposed by her parents. In a letter to Miss Davies Elizabeth wrote about her father's reaction.



"He said the whole idea was so disgusting that he could not entertain it for a moment. I asked what there was to make doctoring more disgusting than nursing which women were always doing, and which ladies had done publicly in the Crimea". Finally she won her father's consent and in 1860—August 1st entered Middlesex Hospital as a nurse in order to see whether she had the determination to study medicine. She soon learned the preparation of dressings and went the rounds with the house doctor and surgeon. Although she was not registered as a student, she was permitted to take lessons from the apothecary, Mr. Plaskitt and gradually added tutors in anatomy, chemistry and other subjects.

In May 1861, Elizabeth payed fees for some lectures in the summer term, but her success was ended abruptly when she answered a question in class that was missed by the male members. The students were angry and presented a petition to bar her from the lectures. As she could not continue at Middlesex she attempted to enter St. Andrews but received here only private tutoring under one Dr. Day. She had instruction in obstetrics during the summer of 1863 under Dr. Simpson in Edinburgh. From February to October 1864, she visited wards of London Hospital; obtained instruction in anatomy and attended mid-wifery cases. Objection of the students to her presence there became so intense that she was forced to leave. On the advice of doctors who were friendly, she sought and again obtained permission to visit the wards of Middlesex Hospital where she received another five months of instruction. For nearly 6 years she had studied and by adding one lecture course to another she had completed the curriculum required of candidates for a medical diploma.

The Society of Apothecaries had told Miss Garrett to get her education privately and they would examine her but now after the completion of her course, it wished to refuse her application. Mr. Garrett threatened legal action and when the Society was advised by its lawyer that nothing in its charter prevented the examination of a woman, she was finally examined in 1865 at the age of 29 and granted a license to practice.

In 1866 she opened St. Mary's dispensary in London for the benefit of poor women and children. From this grew The New Hospital for Women now renamed The Elizabeth Garrett Anderson Hospital and staffed entirely by women.

The year 1870 was an important one for Dr. Garrett. She went to Paris and took six examinations to qualify for a medical degree—the first woman to receive such from the University of Paris. An ardent worker for the enfranchisement of women she was invited by the husbands of her patients to run for the School Board as a candidate from Marylebone. The petition came officially from a Working Man's Association. Women in 1869 had been granted municipal franchise and the right to serve on the school board. The results were gratifying as Miss Garrett was elected with a majority exceeding Professor Huxley's. Three women in different districts were elected, a great triumph for the women's cause.

When Dr. Garrett was selected for appointment to the Shadwell Hospital in 1869 she met J. G. S. Anderson, a member of the board of management. Their friendship culminated in a happy marriage in 1871. From this union there were three children, two of which survived. The son, Sir Allan Garrett Anderson became controller of the navy. The daughter Dr. Louisa Garrett Anderson became a member of the staff of The New Hospital for women. Dr. Louisa in 1914 with Dr. Flora Murray formed the Women's Hospital Corp whose services, rejected by the British Army, were accepted by the French.



They opened Claridge's Hotel in Paris as a hospital. Later when the Women's Hospital Corp was recognized by the British Authorities, it opened another hospital in France and one of 550 beds in London. Dr. Louise published in 1939 an interesting biography of her mother.

After her marriage Dr. Elizabeth Garrett was known as Dr. Elizabeth Garrett Anderson. In 1874 she co-operated with Sophia Jex-Blake in establishing the London School of Medicine for women where she was a lecturer, then dean for 20 years, 1883-1903 and president until her death.

Dr. Anderson was the only woman member of the British Medical Association until 1892. Shortly after her election in 1878, the Association passed the following clause. "No female shall be eligible for election as a member of the Association." Dr. Garrett Anderson spoke against the measure and in 1892 had the satisfaction of seeing it repealed. She was elected president of East Anglian Branch of the British Medical Association 1896-97.

In 1902 Dr. Anderson and her husband retired to Aldeburg where they both took an active interest in the affairs of the community. After the death of Mr. Anderson in 1907 his wife was elected to succeed him as mayor of Aldeburg, the first woman mayor in England. Dr. Anderson died December 17, 1917. "All her life she took a practical interest in hygiene. All her activities were centered around breaking down barriers which shut out women from a profession for which she was convinced they were suited and to enable women to take their share in public work". "For women by women" was her motto.

After Elizabeth Garrett qualified at Edinburgh this avenue was closed to women by a rule which prevented students from receiving any part of their education privately. Thus when Sophia Jex-Blake decided to take up a medical career, such a qualifying examination was impossible. Of all the pioneers in medicine, Miss Jex-Blake was the most militant, antagonizing Dr. Garrett Anderson and other contemporaries by the methods she employed. Born at Brighton in January 1840, she entered Queen's college in 1858 and became a tutor in mathematics there from 1859-61. In order to investigate educational facilities for women she visited Germany and America. While in America she attended lectures given by Dr. Blackwell at the New York Infirmary and College for Women. From New York she went to Boston in 1866 to take up the study of medicine. The death of her father caused her to return home in 1868 and she decided to continue her medical course there. An application to the University of London was rejected, and friends advised her to go to France or Switzerland where women could study. This she refused to do for the following reasons (1) By the medical act of 1858, no foreign degree would be acceptable to a licensing board. (2) The disadvantage of studying all the departments of medical science in a foreign language. (3) It was unjust to be forced to the expedient of studying in a foreign land. The third reason was probably the one that caused Sophia Jex-Blake to take up her crusade.

An application to Edinburgh University was made in March 1869 and after 7 months of consideration by the various bodies connected with the University, such as Medical Faculty, Senatus, General Council, University Court, a resolution permitting women to study medicine was approved by the General Council on October 29th 1869, and placed in the Calendar of the University. The doors of the University were opened to women provided they attended separate classes; payed higher fees if the class was too small to provide a reasonable remuneration at the regular rate; fulfilled all regulation as to matriculation of students; attended classes and took examinations.



In October 1869 Sophia Jex-Blake and four other women took the preliminary examinations in Arts, passed, matriculated in medicine and payed their fees. Many of the professors, were quite friendly and the women did remarkably well in the examinations in botany, chemistry, zoology, anatomy and surgery. Miss Jex-Blake in her book "Medical Women" says that after this friendly beginning the many difficulties the women encountered were all due to the enmity of one man—Sir Robert Christison. He would not give the 5 women a separate course in materia medica nor would he admit them to his regular class. By him the male students were incited to attack the lady members of the class as they were entering the college gates, pelting them with mud and using profane language. The women completed the first half of their course in two years partly by attendance in separate classes and partly by extra-mural classes. As the University forbade more than four extra mural classes and some of the professors following Sir Robert Christison's example refused to give them instruction in separate classes, their troubles multiplied. Law suits, libel suits, appeals, letters in *The Spectator* and *The Times* followed and the result was defeat for the women when in 1872 they lost the suit to compel the University Senatus to let them continue and present themselves for a degree. In June 1873 by a 7 to 5 decision they lost the appeal.

Now that the battle was over in Edinburgh the women had to find some other way of finishing their course. Miss Jex-Blake went to London in 1874 where as she says "we had many kind friends, both in and out of the profession" With the aid of these friends and very little money, the London School of Medicine for Women was opened. As Miss Jex-Blake was not a qualified physician, she acted as secretary of the school and persuaded Dr. Garrett Anderson to join the Council although the latter opposed the opening of a school, "A most prodigious undertaking, time not ripe, odds against it" are some of the expressions Dr. Garrett Anderson used. However, the school was started October 12th, 1874 with twenty-three students enrolled. Among the courses listed was one in Mental Pathology given by Dr. Sankey.

Miss Jex-Blake went to Berne for her degree in 1877 after Parliament in 1876 had passed an enabling act by which Medical Boards were permitted to admit women to their examinations. Miss Jex-Blake and several others took the examinations of The Irish College of Physicians (the first group to welcome women) and their names appeared in the Medical Register in 1878.

When Dr. Jex-Blake learned in 1877 that she was not re-elected to the secretary's post in the college she was so disappointed that upon receipt of her license she went back to Edinburgh where she set up practice at 4 Manor Place and continued the fight begun as a student, to obtain a medical bill favourable to women passed through the Scottish Parliament. In 1883 she moved her practice to Bruntsfield Lodge, an old house overlooking Bruntsfield links where she took resident patients. This formed the nucleus of the Edinburgh-hospital for Women and Children.

An Edinburgh School of Medicine for Women was established by Dr. Jex-Blake in 1886 and she acted as dean and lectured in mid-wifery. This school was founded to give the academical lectures necessary for the qualifying examinations which the Royal College of Physicians and Surgeons, Edinburgh, had opened to women. Clinical teaching was provided by Leith Hospital in 1887 and the Royal Infirmary in 1892. By the Universities (Scotland) Act 1889 women were given the same status as men although there were still some



restrictions in regard to separate classes. These, however, disappeared by the end of the century.

The London School of Medicine for Women had two major problems to solve, a hospital must be found in which to teach the students and an examining board to recognize the course given by the school. Royal Free Hospital of 150 beds was persuaded to co-operate with the school in 1875. In 1877 London University granted recognition to the school and in 1883 the first two graduates received the medical degree of the London University. In 1901 The London School of Medicine for Women became one of the colleges of the newly constituted University of London. The enabling act passed by Parliament in 1876—mentioned previously settled the problem of licensure.

An account would not be complete without reference to Dr. Florence Sabin who has contributed so much to medical teaching and investigation. After her graduation from Johns Hopkins Medical School in 1900 she served as an interne in the hospital for a year, then joined the college staff where she served in various capacities until 1917 when she became professor of histology. An able teacher and investigator Dr. Sabin has inspired many students. She won a \$1,000 prize offered by the Naples Table Association and was given an honorary degree of Doctor of Science by Smith College. In presenting a portrait of Dr. Sabin to the University of Johns Hopkins, Dr. William H. Howell concluded thus "In offering this painting to the University, we, her colleagues, students and friends feel that it will be a matter of especial interest in the history of the Medical School to have preserved a portrait of its first woman professor, one of its most distinguished graduates and one who has contributed so much of real worth to the building up of the School and to the establishment of its reputation as a center of medical research". Recently Dr. Sabin retired from the Rockefeller Institute for Medical Research where for some years she devoted all her time to problems of development. Her investigations have contributed greatly to the knowledge of blood and lymphatic development.

The year 1940 saw the passing of Canada's outstanding medical woman, Dr. Maude Elizabeth Seymour Abbot. Born in St. Andrews near Montreal in 1869 and educated in a private school, Dr. Abbott entered the Arts Faculty at McGill in 1886 and graduated, a gold medalist, in 1890 with a B.A. degree. Although her application for admission to the Faculty of Medicine at McGill was rejected she was accepted by Bishop's College, Lennoxville, Quebec. In her second year of study, she obtained a visiting student ticket to the Montreal General Hospital which gave her the same clinical opportunities enjoyed by the students of McGill University. After her graduation in 1894 she studied abroad three years and returned to Montreal in 1897. Dr. Martin and Dr. Adami gave her permission to work in the wards and laboratories of the Royal Victoria Hospital.

Dr. Abbott's connection with McGill University began in 1898 when she was appointed assistant curator of the McGill Pathological Museum and three years later she became curator. In this year she first met William Osler who influenced her greatly in the following years when she catalogued and remounted many of the specimens he had left at McGill. He persuaded the Governor's of McGill University in 1905 to give Dr. Abbott a Governor's fellowship in pathology. In 1910 she received an M.D. degree from McGill (honoris causa) and became lecturer in pathology. In 1923 Dr. Abbott was promoted to assistant professor of medical research and for two years was



loaned to the Women's Medical College of Pennsylvania where as professor of pathology and bacteriology she reorganized the department and correlated clinical and pathological teaching.

Dr. Abbott's first paper on Functional Heart Murmurs was published in 1899 and she continued to be interested in this subject culminating her contributions with an Atlas of Congenital Cardiac Disease in 1936. Besides the Atlas, her chief work was an annotated bibliography and memorial to Sir William Osler (1926).

In addition to her teaching and research Dr. Abbott was secretary-treasurer of the International Association of Medical Museums from the first meeting in 1907 and editor of its Bulletin until 1938. Upon her retirement in 1936 she received the degree of LL.D. from McGill University, an honor that gave her great happiness. She passed away September 2nd, 1940 of cerebral haemorrhage. To quote from one article upon Dr. Abbott. "I would say that to her McGill is indebted not only for scientific contributions, for the organization of many projects, for the establishment of closer and more intimate contacts with men and institutions throughout the medical world, but still more for the worth of her example to the generation that lived under the influence of what she was and what she aspired to be".

As a matter of interest, Halifax Medical College graduated a woman, Annie Isabella Hamilton in 1894 and since then 48 women have received degrees in medicine from the Halifax Medical College and Dalhousie University.

What is the likely career of women who graduate in medicine? Contrary to the general opinion, there is ample evidence to show that few women doctors who marry fail to practice medicine in one form or another—Great numbers in past years have gone as medical missionaries, many of them as married women, to lead active useful lives in foreign lands. Others enter research in various medical fields. Of these, the majority are preparing for or are now in public health work. According to Women in Medicine for January 1939, 90 life insurances companies appoint women examiners and 11 others "have no objection to so doing". Women doctors are accepted by the Royal Canadian Air Force and more than 100 are now serving with the Royal Army Medical Corps in Great Britain.

Although women can become members of the American College of Surgeons, American College of Physicians, Royal British Association of Physicians and Surgeons, there is much pioneer work yet to be done. In spite of the fact that a year's internship is required before a candidate can obtain a license to practice, a majority of hospitals refuse to take women internes. Of 690 hospitals in the United States in 1938, 531 or 96.4% were closed to women. Of 105 hospitals willing to admit women internes, 26 have never appointed a woman. There were in the United States in 1937, 270 internships for women and 134 possible residencies and these were not all in general hospitals. Many hospitals have no suitable accommodations for women internes, a condition that may be changed as new hospitals are built. This difficulty of placing women frequently limits the number of women admitted to co-educational schools. While much has been accomplished in opening the field of medicine to women there is still much opposition to be overcome. Dr. Chevalier Jackson, president of the Women's Medical College of Pennsylvania sums up the medical education of women in the following quotation.

"It has always seemed remarkable to me that little or no consideration has been given to the medical education of women as an education. For some



reason incomprehensible to me, the value of medical education for women is gauged on the basis of financial returns in the practice of medicine. Next in frequency to this viewpoint we encounter the statement, "Oh, the chances are after graduation she will get married anyway! Both of these viewpoints are fallacies. The practice of medicine by woman or man never was and certainly is not today, considered on the basis of financial returns. Any qualified practitioner can make a living but more than this is not to be expected. There are compensations in the practice of medicine that far outweigh the monetary returns and which are entirely denied to persons engaged in commercial pursuits. As to the graduate getting married, she may or may not continue to practice. But, I ask you, is there any education in this world that could better fit a woman for married life and motherhood than a medical education? Far be it from me to belittle the attainments of women, who for instance, go into the study of higher mathematics—and the like, every woman should be free to follow these studies, if she so desires, but I am utterly unable to believe that such an education would fit a woman for raising a family in the same way or to the same degree as would a medical education. It is absurd to regard a medically educated woman as a total loss if she does not practice".

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## \*Obstetrical Difficulties

SURGEON-LIEUTENANT G. A. HENDRY, M.D., R.C.N.V.R.

A DAY or so ago, Dr. MacAulay was kind enough to ask me to speak for a short time tonight on a few of the difficulties encountered in the practice of obstetrics. Prolonged labour, breech presentations and posterior positions of the child are frequently encountered. Ante partum haemorrhage may be troublesome and the time, type and place for Caesarean section may give cause for concern.

With your permission, I will touch briefly on these subjects.

Posterior positions are encountered in 30% of all vertex presentations and in most instances are associated with a long hard labour. A 24 or 48 hour labour is not approved of, by the patient or her relatives, and we are frequently exhorted to interfere and terminate the pregnancy when the cervix is perhaps half-dilated. If we succumb to these entreaties, we will frequently do irreparable damage to mother and child.

It must be remembered that a woman must not be delivered until the cervix is completely effaced. If the labour is progressing slowly and the mother is showing signs of exhaustion, as evidenced by a rising pulse rate, irregular pains and dehydration, a period of rest is definitely indicated. She should be given an ample sedative, such as an H.M.C. #1 or morphia gr.  $\frac{1}{4}$  plus 3 grains of nembutal. Heroin in such cases appears to have little effect. Dehydration should be combatted by an intravenous of 5% glucose in saline—1000 c.c. or more.

As a rule, such treatment will interrupt labour for perhaps 4 hours. When labour pains recommence they are usually of good quality.

There are four ways in which a posterior may terminate:

1. The most common method is for anterior rotation of the occiput to occur through 135° to the corresponding anterior position. This rotation usually will not take place until the cervix is completely dilated.

2. The occiput may rotate anteriorly through 45° to a transverse arrest.

3. May rotate posteriorly through 45° to a persistent posterior.

4. May deliver as a face to pubis.

Rotation to an anterior will lead to spontaneous delivery. Spontaneous delivery, too, may result from a face to pubis if the baby is not too large and the maternal pelvis is ample.

If there is delay in the second stage with the occiput posterior and low in the pelvis, operative delivery with forceps is indicated without correcting the position. There is less danger of trauma to the child if delivery is effected in this manner. Manual rotation and delivery as an anterior may well produce intracranial haemorrhage for the head must be remoulded in its new position and unless great care is taken in the delivery, this complication will result. Deep transverse arrests and persistent posteriors must be delivered by manual rotation and forceps extraction.



Before attempting delivery, the bowel and bladder must be emptied.

The vaginal hand should confirm the diagnosis of posterior presentation and determine the degree of flexion or extension by palpation of the sagittal suture and the fontanelles.

When rotating an L.O.P., the right hand should be used. R.O.P.—the left hand. This procedure requires surgical anaesthesia.

The vaginal hand should be carried up under the head so that the occiput rests in the palm. The occiput then is rotated toward the mid-line until the position is overcorrected; i.e., a left occiput posterior should be rotated to an R.O.A. The hand is then allowed to slip down the side of the head until the blade is applied. The first blade must be steadied by an assistant until the second blade is in place. If the application is not satisfactory, the blades must be removed and reapplied.

Frequently you will find that the occiput will snap back to its original position as soon as the vaginal hand has ceased the rotation. This results from the body failing to rotate with the head and is due to impaction of the shoulders in the pelvis. In such cases, the hand should be passed beyond the occiput and the fingers inserted under the posterior shoulder. By applying pressure in this manner, the shoulder will be freed and may be rotated. It will be necessary to dislodge the head from the pelvis in a few instances but pressure with the free hand on the abdomen above the pubis will push the head down into the pelvis again once the back of the child is rotated to the front. Axis traction rods facilitate forceps delivery. The delivery must be performed slowly to enable moulding to occur and prevent tentorial tears.

I believe I am safe in saying that a persistent posterior is as worrisome to the general practitioner as in any other single obstetrical difficulty. The simple manoeuvre of dislodging the head and rotating the shoulder will usually permit a good forceps application and simplify the procedure.

### Breech

Breech presentations are encountered in almost 5% of all deliveries. This presentation is not abnormal but may be associated with pelvic disproportion or pelvic tumors. For this reason, a careful pelvic examination should be made in multiparas as well as in primiparas during the prenatal period.

At the time of labour, the foetal mortality rate is high. Most babies are lost by premature, unnecessary interference. If left alone, many would deliver spontaneously. In primiparas, a second stage of 4 hours is not unduly long. Many feel that there is danger of compression of the cord once the perinaeum is bulging. This is a false impression for foetal asphyxiation cannot occur from compression until the cord is pinched between the foetal head and maternal symphysis pubis. The head, however, will not have entered the pelvis until the buttocks are outside the vulva. The breech may be well down in the vagina before the cervix is completely effaced. In such instances, breech extraction may cause the cervix to clamp down on the foetal head and cause death prior to delivery.

Throughout the late first stage and all of the second stage, the foetal heart should be followed very carefully. It is the only indication of foetal distress.

All breech presentations should be delivered, with the mother in the exaggerated lithotomy position. Spontaneous delivery may be aided by abdominal pressure with each pain and guidance from below. No traction is necessary in most instances. A wide mediolateral episiotomy is advisable in all primipara



and should be performed when the breech is at the vaginal outlet. Anaesthesia should be intermittent.

Foetal distress, prolapsed cord or delay in the second stage of labour are indications for breech extraction. The commonest cause of delay is a high arrest of a frank breech presentation. Before attempting delivery, the patient should be under surgical anaesthesia. The bladder should be emptied. The vagina should be well lubricated with deltol cream or green soap and the perinaeum should be well ironed out.

A warm bath should be available for the baby and a pair of straight forceps should be at hand, for delivery of the after coming head.

In performing the extraction, the left hand should be used for an L.S.A. or L.S.P. The right hand for R.S.A. or R.S.P. The breech is disimpacted by passing the hand along the thigh to the knee. Pressure on the back of the knee will cause flexion of the leg and permits the ankle to come within grasp of the hand. The other ankle is obtained in similar manner and both legs are delivered into the vagina. While the vaginal hand is searching for the legs, the abdominal hand should exert pressure on the fundus to bring the child within reach and to prevent the cervical segment from being torn if upward pressure is exerted by the vaginal hand.

Piper's method of extraction is excellent in practice. Once the legs have been obtained, he exerts traction on the posterior leg. By so doing, the back becomes posterior and he persists until the buttocks of the child are "sitting in the hollow of the maternal sacrum".

By this manoeuvre, the buttocks will not impinge on the symphysis and cause damage to the bladder. The arms will not be displaced from their crossed position on the chest, as is likely if they were permitted to sweep over the sacral promontory.

The second manoeuvre is one of rotation of the back anteriorly combined with downward traction on the ankles, until the angles of the scapulae are visible. During the rotation, the arms will drop into the pelvis.

The occiput is now anterior and may be extracted in the usual manner.

Although this manoeuvre is excellent, it is not foolproof. Certain difficulties may be encountered.

First, you may meet with resistance during traction, before the angles of the scapulae are visible. In such cases, the arms have swung up behind the neck. If traction is continued, the child will suffer injury. When resistance is encountered, push the child up slightly, grasp the child firmly by the back and chest and rotate the body first to one side and then to the other. This may require rotation through  $90^\circ$  in both directions, but will free the arms and bring them into the pelvis where they are within easy reach. The need for a well lubricated vagina is demonstrated if this manoeuvre is necessary.

The next difficulty is extension of the head. If encountered, forcible flexion with a finger in the mouth will probably result in a dislocation or fracture of the mandible or even intracranial damage. Swing the child's body upward over the maternal symphysis and apply a pair of Simpson's straight forceps to the head to effect delivery.

There is no great urgency in delivering a breech. You have approximately 10 minutes after the foetal circulation is shut off. All breech babies when delivered as far as the umbilicus should have a warm towel thrown over them to counteract stimulation of respiration by the cold air. A loop of cord should be pulled down at this stage or the cord will be torn during the delivery.



### Internal Podalic Version

Should be performed (1) for various complicated positions of the child—transverse lie; brow (where conversion to occipital or anterior face presentation is impossible); face presentations when the chin is posterior. (2) For prolapsed cord—in some cases. (3) For marginal or lateral placental praevia. (4) For accidental haemorrhage.

Maternal dangers from this procedure will, of course, include rupture of the uterus, haemorrhage from the placental site and uterine inertia following delivery.

There is not time to discuss in detail methods of handling extended positions of the foetal head. It is sufficient to say that brow and forehead presentations should be recognized early in labour and an attempt should be made to convert these into normal vertex presentations. If such a procedure is impossible, conversion to a face presentation with the chin anterior should be attempted. Internal podalic version should be reserved for cases which will not respond to the simpler measures.

Just a few words about a face presentation. When the chin or mentum is anterior, delivery will occur normally or forceps can be applied and delivery effected without trouble. This, of course, is possible because the cervico-bregmatic diameter is the diameter of engagement of the head. As this diameter is only 9.5 cms., it is the same length as the suboccipito-bregmatic diameter encountered in a normal vertex presentation.

In contradistinction, a face presentation, with the chin posterior, is an impossible one. In such cases, the head and shoulders attempt to enter the pelvis at the same time. The diameter of engagement, therefore, is not only the cervico-bregmatic but in addition, the width of the chest must be included. Unless the maternal pelvis is large and the child small, spontaneous delivery is impossible. An attempt should be made to convert the posterior face presentation to an anterior. If this is impossible, an internal podalic version should be performed under deep anaesthesia.

### Caesarean Section

Caesarean Section must not be considered lightly. The maternal mortality ranges from 1.5% to 10% through Canada and United States. Several types of Caesarean operations have been advocated.

1. The high or classical section. 2. The low cervical. 3. The Porro. 4. Hirst's Operation, whereby the peritoneum covering the uterus is sewn to the abdominal peritoneum before the uterus is opened. 5. The Portes Gottschalk Operation, where the uterus is delivered from the abdominal cavity and the wound closed prior to opening the uterus. The latter will remain extra-abdominal until involution is complete. A second operation is then required to replace it in the pelvis. 6. Latsko's Extraperitoneal Approach.

The last three operations are designed for infected cases and are rarely used. The choice of operation usually lies between a classical and a low Caesarean Section.

The classical operation should be reserved for clean cases where a rapid delivery is indicated. These include partial separation of the placenta, where the baby is alive and viable, central placenta praevia, partial placenta praevia, where there is considerable bleeding and a rigid cervix.

The low section should be employed wherever possible, regardless of whether the patient is in labour or not. It has been shown that the maternal



mortality rate is half that of the classical section and the morbidity rate is much lower. There is less danger of scar rupture during subsequent pregnancies and postoperative intestinal obstruction is quite rare.

Patients who show minor degrees of pelvic disproportion should not be subjected to Caesarean Section until they have had an adequate test of labour. Such a test requires 8-12 hours. Only one vaginal examination should be performed during this period and strict aseptic technique must be observed.

Intact membranes are a distinct advantage but a low section is relatively safe within 6 hours of rupture.

A rising pulse and temperature plus repeated vaginal examinations condemn any Section other than a Porro. The low section is quite useful for habitual death of the foetus in utero or cases of extensive myomectomy. A Classical Section may be necessary in cases of pelvic tumors, when such tumors cannot be displaced prior to opening the uterus.

### **Ante Partum Haemorrhage**

During the latter months of pregnancy, two types of haemorrhage are not uncommonly encountered—accidental haemorrhage and haemorrhage due to placenta praevia.

Accidental Haemorrhage is haemorrhage from premature separation of part or all of a normally implanted placenta. The cause is unknown but occurs when the continuity between the maternal and placental vessels is disrupted. It is frequently associated with preeclamptic toxæmia, or is the result of trauma. The haemorrhage may be concealed or revealed. External blood loss is no indication of the severity of the haemorrhage.

The severity varies greatly. In mild cases, there is usually lower abdominal pain. There may be dizziness or faintness. The uterus becomes sore and is tender to the touch in part or throughout. If the separation is complete, there will, of course, be the usual signs of severe haemorrhage. The uterus will enlarge in size, become boardlike in consistency, due to extravasation of blood into the uterine muscle. Foetal movements will cease, as will the foetal heart.

All cases of accidental haemorrhage should be admitted to hospital. Blood donors must be obtained and in all but the mildest cases, labour must be induced. This, regardless of the duration of the pregnancy. Examination under anaesthesia, with rupture of the membranes, will usually suffice. Labour will progress and blood loss must be counteracted by transfusion. A bag may have to be inserted to promote contractions in a uterus which is becoming atonic or a Braxton Hicks Version may be necessary. Blood should be given freely. The height of the uterus should be watched carefully. The tenderness and consistency of this organ, too, must be followed.

If labour does not commence, if the uterus is increasing in size and in tenderness, and if the mother is failing, a Porro Caesarean Section may be necessary. In other words, the uterus must be emptied or removed. If the mother is at term, the baby alive and bleeding is moderately severe; a Classical Section is indicated. If the child is dead, haemorrhage should be combatted by the usual methods and delivery effected from below. If, however, the haemorrhage has invaded the uterine wall, the uterus will not contract and despite the presence of a dead child, a Caesarean Section must be performed. A hysterectomy will be necessary in some cases for the uterus will not contract and death will occur from post partum or intraperitoneal haemorrhage.



### Placenta Praevia

Haemorrhage from an abnormally implanted placenta—haemorrhage from the lower segment of the uterus. During the last trimester of pregnancy, the cervix becomes thinned out—muscular tissue ascends into the uterus and in so doing may free the placenta from its attachment. Haemorrhage may then amount to only a few drops and subside. Invariably, it will recur at a later date. There is no associated pain and as we have all learned, painless bleeding in the latter months of pregnancy must be considered as haemorrhage from a placenta praevia.

A patient who is at or near term and is bleeding should never be examined at her home. She should be admitted to hospital and typed for transfusion. One will determine by abdominal palpation whether the uterus is tender, (in placenta praevia, it is not), whether the presenting part is in the pelvis or whether it is above and displaced to one side. Any mass, such as a placenta, lying in the pelvis will produce an unusual lie of the child.

If bleeding should cease, it is well to mark time and observe the patient—refrain from a vaginal examination.

Recently a new form of soft tissue technique has been introduced, which accurately determines the site of the placenta. It is far superior to the method employed by introducing a dye, such as sodium iodide, into the bladder.

If bleeding continues, an examination should be carried out under general anaesthesia. The operating room should be prepared for a simple rupture of the membranes, for a bag induction and a Caesarean Section. The choice will be determined by the examination. Gentle examinations will frequently produce a severe haemorrhage and one must be prepared for such an occurrence.

It is generally conceded that central Placenta Praevia is best treated by Caesarean Section.

The bleeding from marginal and lateral placenta praevias can usually be controlled by rupture of the membranes alone or by rupture of the membranes plus a bag induction. In some cases, where the cervix is rigid and not taken up, it may be necessary to perform a section.

### Conclusion

In this paper, I have touched on a few of the problems that are encountered in private practice. The methods that I have advanced are perhaps useful and helpful when dealing with hospital patients. In such instances, one has adequate equipment, instruments and help. When faced with the same problems in the home, however, I realize that ingenuity is the best weapon. My own experience in the home is very limited, and I must admit, I hope it will remain so.

In closing, may I take this opportunity of thanking the members for the privilege of speaking tonight.



# Case Reports

## RUPTURE OF DUODENAL ULCER INTO GALL-BLADDER WITH HEPATIC ABSCESS FORMATION, SIMULATING CORONARY ARTERY DISEASE

By

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THE following case is being reported because of the interesting problem of differential diagnosis and the unusual post-mortem findings.

*Case History:* The patient was a white female, aged sixty-three years. Her family and past history were without any special importance except that two years ago she was found to have a blood pressure of 220/100, which was confirmed on several subsequent examinations. The patient stated that she had gained some fifteen pounds in the last ten years, following the menopause. In the summer of 1941 she complained of gastric distress, but did not pay any particular attention to it.

*Present Illness:* On November 12, 1941, one of us was called when she was found shocked, very pale and greatly distressed. She complained of a heavy sensation of pain localized over the precordium and to a lesser extent over the left side of the chest. Physical examination at that time disclosed her blood pressure to be 140/105. The heart rate was 110 and she had a slight temperature. A tentative diagnosis of coronary artery thrombosis was made.

She remained in bed, complaining only of an aching pain in the left side, which came on while at rest and lasted one to two minutes. While in bed the patient lost her appetite completely, and vomited from time to time. Careful questioning revealed that some two months before her attack of pain over the precordium, she had loss of appetite, associated with weakness. On December 27th she vomited several times, so that it was felt best to hospitalize her for a complete gastro-intestinal X-ray examination. The report of Dr. S. R. Johnston is as follows:

"The stomach does not show any abnormality. The first portion of the duodenum is irregular. There is marked angulation of the second portion suggesting adhesions. A circumscribed opacity is observed just above the duodenum and in contact with it, suggesting a gall-stone. The stomach empties freely with normal peristalsis. Conclusions: The appearance of the duodenum suggests an ulcer with adhesions to the gall-bladder."

The blood picture gave the following results: Red blood count 3,970,000 per cu. mm.; white blood count 14,000 per cu. mm.; Haemoglobin was 75% and the blood chemistry was normal; occult blood in faeces was strongly positive. Agglutination tests were negative for typhoid and para-typhoid. While in the hospital it was found that she was running a temperature ranging from 99° in the morning, to 102° in the evening. The patient continued to vomit and at times the contents were of a dark, coffee-coloured appearance. She returned home unimproved.

On January 16, 1942, a careful physical examination revealed the following points:—The skin was rather moist and there was slight cyanosis. No oedema



was present. Examination of the head, throat, mouth and eyes, including eye-grounds, was essentially negative. Some rales were heard over the lower part of the chest. The heart appeared enlarged to the left, with the apex impulse in the 6th interspace at the axillary line. Auscultation revealed a blowing systolic murmur at the apex, and a gallop rhythm. The second sound was accentuated at the base. Examination of the abdomen revealed no distention or tenderness, and the liver could not be palpated. The electrocardiogram did not show any evidence of coronary occlusion and it was felt that the whole syndrome was an abdominal one which, in view of the fever and the X-ray findings, was probably related to the gall-bladder. The patient refused any further investigation and her condition became gradually worse. The vomiting increased and on January 30th she complained of acute, severe pain in the right hypochondrium and vomited blood. She became jaundiced; no further pyrexia was noted. On February 9th she developed some petechiae over the epigastrium and died on February 11th.

*Post-Mortem Findings:* The body was that of an adult white female with a definite icteric tinge to the skin and sclerae.

*Thorax:* Both pleural cavities were obliterated with fibrous adhesions. *The lungs* appeared normal. *Heart:* There was a definite increase in pericardial fat particularly on the right side which was dilated. The myocardium was very thin, soft and flabby. The left ventricle showed a slight hypertrophy and the aortic and mitral valve leaflets were somewhat sclerotic while the mitral ring was very slightly dilated. Both coronary arteries were thickened and sclerotic but their lumina were quite patent and no myocardial infarcts, old or recent, were noted nor was any patchy fibrosis present. *Abdomen:* The greater omentum was firmly adherent to the gall-bladder region. No peritonitis was present. The stomach contained a large quantity of dark watery altered blood. *Liver, gall-bladder and duodenum:* The duodenum was firmly adherent to the gall-bladder region by dense fibrous adhesions. The bladder per se was not recognisable, but the liver in this area contained a large orange sized irregular abscess filled with a foul smelling, thin, faecal-stained fluid and lined by a necrotic pyogenic membrane; the surface adjacent to the duodenum was formed by a thin, greyish fibrous membrane, apparently the remains of the gall-bladder wall. On opening the duodenum a chronic ulcer with necrotic edges was found on the upper and posterior wall, at the junction of the first and second parts, and a fistula connecting it to the liver abscess was demonstrated. Distal to the ulcer the duodenum was partially obstructed by an inflammatory stricture.

The pathological picture suggested that at some previous time adhesions were formed between the duodenum and gall-bladder, drawing them into close apposition and subsequently the duodenal ulcer ruptured into the bladder with the formation of the hepatic abscess.

The remainder of the liver, spleen and kidneys showed a marked toxic change. The other viscera showed no pathology.

*Pathological Diagnosis:*

- (a) Chronic Duodenal Ulcer with perforation into gall-bladder.
- (b) Spontaneous cholecysto-duodenal fistula.
- (c) Hepatic abscess.

*Discussion:* The original findings of fall of the blood pressure, associated with symptoms of shock and severe precordial pain, justified fully the tentative diagnosis of coronary thrombosis and this diagnosis would have had to be



sustained even with the normal electrocardiogram recorded later, for it is known that electrocardiographic changes, after an attack of coronary thrombosis, may be either lacking, or may return to a normal pattern. However, the history of loss of appetite and continued vomiting could not be explained by coronary thrombosis alone, and this with the X-ray findings, suggested the possibility of an abdominal lesion, rather than a coronary occlusion, as the explanation of her symptoms. It is well known that an acute abdomen may present symptoms of precordial distress, while the opposite is equally true.

The diseases of the gastro-intestinal tract that most often simulate cardiovascular disease are noted below:

1. *Disease of the oesophagus:*
  - a. Spasm producing substernal pain.
  - b. Ulceration producing pain, heartburn.
  - c. Cancer producing pressure or symptoms of perforation.
2. *Diaphragmatic hernia* (anatomical weakness, imperfect development or trauma).
3. *Diseases of the stomach:*
  - a. Acute gastritis (Herrick 1935).
  - b. Ulcer-perforation may simulate coronary occlusion.
  - c. Carcinoma (rare).
4. *Disease of the liver and gall-bladder:*
  - a. Gall-stone colic may simulate angina or occlusion.
  - b. Portal cirrosis (rare).
5. *Disease of the intestinal tract:*
  - a. Spastic colitis.
6. *Functional disturbances:*
  - a. Cardiospasm.
  - b. Flatulence.
  - c. Gastric neurosis, etc.\*
7. *Acute haemorrhagic pancreatitis.*

Of these, gall-bladder disease is probably the commonest to give such a syndrome. While our clinical diagnosis of a gall-bladder condition was confirmed to a certain extent by the physical examination, the acute manifestation of pain associated with vomiting of blood, fluctuating jaundice and drop of temperature, could not be satisfactorily explained by us on this basis alone. It was therefore suspected that a malignant condition, possibly of the ampulla of Vater, might be the underlying factor, since the terminal sequence of events in this case closely simulated that disease.

Following the post-mortem an attempt was made to correlate the anatomical findings with the clinical symptoms. It was assumed that the original attack of pain simulating coronary artery occlusion, was in effect due to the rupture of the duodenal ulcer into the gall-bladder and the subsequent fever, nausea, vomiting, and aching pain were related to the developing abscess, the original cholecysto-duodenal fistula becoming blocked. The lack of tenderness over the gall-bladder region is difficult to explain, except that the organ was buried in adhesions and then could not be palpated. The second attack of severe pain in the right hypochondrium (January 30, 1942) was apparently due to a breaking down of the original fistula with drainage of the abscess into the duodenum and consequent disappearance of the fever, while the terminal jaundice was most probably of toxic nature.

\*See also J. S. Rodman and William G. Leaman: *Rev. Gastroenterol.* 1939, 6, 366.



## CANCER OF NASOPHARYNX

Mrs. E. A. aged 63, consulted me on 17.6.41 for *impaired hearing* of two month's duration dating from an attack of what she called the "flu." She had never had any ear trouble of any kind "not even wax." Her general health was "all right" although she had had "catarrh" for years. Examination showed a small centrally located healed perforation of the left ear drum, the right was of normal appearance. There was pus presenting in the nasopharynx, her breath had a soft sickening odour. Transillumination showed both antra to be defective, the left the more so. On inflation the right Eustachian tube was quite free and the left fairly so. Irrigation of the right antrum showed little in return and on this occasion I was unable to enter the left. As the attempt was a bit disturbing I resorted to the use of ephedrine 1% in normal saline followed by the use of soluseptizine and posturing with the tip of the chin and the entrance to the external auditory meatus in a vertical line. Although there was a temporary lull in the amount of discharge and degree of odour, the left was successfully irrigated and a +++ quantity of pus appeared in the return flow. The next day, June 27th, a free opening was made into the left antrum beneath inferior turbinate. After one or two subsequent irrigations she left the city. On August 21st she returned and was admitted to the Victoria General Hospital. After a period of rest and a general medical examination it was planned to deal radically with her left sided nasal sinuses. Both clinical and radiological examinations suggested a pan sinusitis. Irrigation of the left antrum now showed it to be surprisingly clean. About this time, September 11th, the patient complained, in addition to a left sided headache, more or less pain in and about the ear, nasal discharge and deafness, of difficulty with breathing through the nose and that her denture seemed to be pressing against a lump. Examination revealed a bulging of the soft palate. Under a general anesthetic the nasopharynx was found filled with a fungating mass which gave the finger the sensation as if of the consistency of adenoids. As operative treatment was out of the question, Dr. S. R. Johnson was asked to give her as much comfort as was possible with irradiation. Histological report of the biopsy was "squamous epithelioma." She died November 23rd. Post mortum examination was refused. Although this disease is characterized by early extension to the cervical lymph nodes, odd as it may sound, I was unable to satisfy myself of their presence.

In a paper on naso-pharyngeal carcinoma, originating in Hong Kong and published in the *British Journal of Surgery*, April, 1941 and abstracted in the August, 1941, number of the *Journal of Laryngology and Otology*, an analysis of 620 cases of cancer showed the carcinoma of the nasopharynx was second only to that of the cervix uteri in frequency, occurring in no fewer than 114 cases. As the reviewer suggests such a record is in sharp contrast to the impression gained by the few references in the text books and literature.

According to Martin and Blady cancer of the nasopharynx makes up about 2% of all malignant growths of the head and neck at the Memorial Hospital, New York City. Because of the absence in many cases of local symptoms in the nasopharynx, the diagnosis is frequently delayed or missed entirely. In the order of their frequency, the first symptoms complained of were cervical metastases (probably the patient really said "a swelling or lumps in the neck"), nasal obstruction or discharge, headache or local pain and



defective hearing or pain in the ear. The authors emphasize that thorough mirror examination of the nasopharynx is necessary to detect these growths, and where abnormal tissue is found biopsy should be done. Cervical lymph adenopathy calls for examination of the nasopharynx. The surgical inaccessibility of the primary lesion and its high radiosensitivity make irradiation the treatment of choice and a combination of external and intra cavitory (that simply means by way of the mouth) irradiation gives the best results. Cervical metastases from this rapidly growing, highly anaplastic tumor and also best treated by irradiation. The net five year cure rate (freedom from signs or symptoms) in the authors' series was 25%.

S. J. Crowe in his editorial comment in the *Year Book of Eye, Ear, Nose and Throat* 1941 writes "Since irradiation is the only treatment, I am opposed to biopsy. The nasopharynx is so rich in lymphatics that the danger of spreading the growth more than offsets the advantages of a microscopic diagnosis. Besides, biopsy examination is not infallible. A negative report may mean the tissue removed was in the immediate neighborhood but did not actually include the growth. The biopsy wound may become infected and cause excessive bleeding and discomfort to the patient. This applies to early growths that have not yet metastasized. If cervical glands are enlarged, the removal of a gland is preferable to biopsy from the nasopharynx.

The most expert radiologic care in dosage and use of the screen is necessary to cure a growth in the nasal passages or nasopharynx. The ideal dosage of radium is an amount just sufficient to stop cell division. Any excess destroys tissue and leads to ulceration, osteomyelitis and severe and long-continued pain."

H. W. SCHWARTZ



# Abstracts From Current Literature

MAMMARY CARCINOMA. A REVIEW OF 2,636 CASES. MacDonald, I.: Surg. Gyn. Obs., 1942, 74:75.

The records of 2,636 cases of mammary carcinoma, 1,511 5 year cures and 1,125 recurrent cases, have been reviewed. Comparative statistics are presented for the factors of age, childbearing, and the known duration of tumor. Collective data concerning the influence of heredity and lactation in the genesis of the disease are analyzed. The state of disease at treatment and the survival period of the 5 year cures are separately presented.

The age of patients with mammary carcinoma does not have the prognostic significance with which it is commonly accredited. Excluding the cases of "inflammatory" carcinoma and those occurring in gravid and puerperal women, more common in the young, carcinoma of the breast at an early age merits as radical an approach with as much chance of cure as in older women. The best results are obtained in those patients who are 35 to 50 years of age, and the least favorable in the decade from 50 to 60.

There is evidence of an inherited susceptibility to cancer in approximately 20 per cent of this series, but among the relatives of those women having an hereditary background of cancer there is an excess of breast cancer at least three times greater than in the general population.

Nulliparae are more prone to develop cancer of the breast than women who have had children, but once developed the prognosis is as good, or perhaps better, for the nulliparous woman. The number of children borne by parous women has little or no influence on prognosis.

The most consistent apparent factor in the genesis of mammary cancer is the failure of the breast to perform its expected physiological function. A full period of lactation in childbearing women seems to offer a degree of protection against subsequent development of breast cancer.

Early treatment is of utmost importance in the cure of certain early lesions predestined otherwise to undergo rapid growth and early dissemination, but in general end-results are determined more by natural selection than by early treatment. Tumors of long duration in themselves are no contra-indication to radical treatment, for 25 per cent of the 5 year cures here recorded were treated more than 1 year after recognition of the tumor.

To deny patients with otherwise operable neoplasms the chance of radical treatment because of the presence of axillary node metastases is to face the possible loss of 40 per cent of attainable 5 year cures.

The 5 year post-treatment period as an arbitrary standard for the evaluation of therapeutic measures is inadequate for mammary carcinoma, and may well be replaced by a minimum 9 year period.

VITAMIN E AND NERVOUS DISEASES. Cal. and Western Med., Harvey, R. W., Hume, P. B., 1941, 55:293.

Harvey and Hume gave alpha-tocopherol for forty to four hundred and eighteen days to patients with neuromuscular disease. Of sixteen patients



with amyotrophic lateral sclerosis the progress of the disease in four was checked after treatment, suggesting but not proving the possibility of arrest. Of nine patients with progressive muscular atrophy one showed slight clinical improvement. Of twenty patients with progressive muscular dystrophy four showed slight to moderate clinical improvement, while in none was there any objective evidence of further progress of the disease. Two of three patients with congenital amyotonia showed improvement which probably should be attributed to spontaneous recovery. Of three patients with dystrophic myotonia and one with dermatomyositis none were improved. Two of eighteen patients with multiple sclerosis had remissions of six and twelve months. The improvement could not be attributed to the treatment. The most that can be expected from vitamin E therapy is arrest of the disease process.

MORTALITY AND MORBIDITY IN SURGERY OF THYROID. Amer. Jour. Surg., Heyd, C. G., 1942, 55:18.

Heyd states that whatever the etiologic factor or factors might be in hyperthyroidism the disease is not a single condition. It may manifest itself in a variety of clinical pictures with different pathologic entities. The indications for surgical intervention depend on the clinical manifestations, pressure symptoms and malignant changes. Overdosage and continuous administration of iodine preparations are to be discouraged. Iodine does not cure goiter; it aids preoperative treatment, controls symptoms and is of great value in crisis. The incidence of cancer of the thyroid is fairly constant, and if every patient with a nodular goiter is considered as a candidate for surgical intervention, the incidence may be decreased. Good results are the rule in cardiac disabilities that are the result of toxic adenomas. In exophthalmic goiter surgical intervention is only one phase of treatment; a proper medical regimen and control of symptoms for not less than a year postoperatively are equally important. The basal metabolic rate is but one sign of hyperthyroidism, and it should never be over-emphasized. Vocal and respiratory difficulties that follow thyroidectomy are still a pressing problem to even the most expert surgeon.

INTRAVENOUS USE OF SODIUM SULFADIAZINE IN THE TREATMENT OF PNEUMOCOCCIC PNEUMONIA. Domm, A. H., Arch. Int. Med., 1942, 69:51.

Sodium sulfadiazine administered intravenously is an effective therapeutic agent in the treatment of pneumonia and may be used with a satisfactory margin of safety to the patient. This form of therapy is offered not as a routine procedure but as a method of treatment which may be resorted to in cases in which oral therapy is impracticable or impossible. Further experience may show that smaller doses or longer intervals between injections may be substituted for those employed in this study without sacrifice of therapeutic effectiveness.

In normal subjects 3 Gm. of sodium sulfadiazine administered by vein maintained an average concentration of free drug in the blood above 5 mg. per hundred cubic centimeters for eight hours. In patients with pneumonia 2 Gm. at twelve hour intervals maintained an average concentration above



5 mg. per hundred cubic centimeters, while 3 Gm. maintained an average concentration above 8 mg. per hundred cubic centimeters.

Sodium sulfadiazine administered by vein at twelve hour intervals is an effective method for treatment of pneumococic pneumonia. Results are comparable to those obtained by oral therapy with sulfadiazine.

Administration of sodium sulfadiazine by vein appears to be a safe procedure.

SULFADIAZINE; THERAPEUTIC EVALUATION AND TOXIC EFFECTS ON 446 PATIENTS. Finland, M., Jour. Am. M. Ass., 1941, 116:2641.

This article deals with an evaluation of the effectiveness of sulfadiazine in the treatment of various types of infections. From an analysis of 446 patients with infections varying from pneumonia to focal areas of sepsis the following conclusions were reached:

1. The drug was highly effective against pneumococic, staphylococic, and streptococic pneumonias; meningococic infections; acute upper respiratory disease including sinusitis; acute infections of the urinary tract, particularly colonbacillus infections; and finally acute gonorrhoeal arthritis.

2. The drug appeared to be of questionable value in most of the chronic infections such as chronic pulmonary disease, chronic urinary disease, chronic gonococic arthritis, and subacute bacterial endocarditis.

In general, sulfadiazine appeared to be as effective as sulfapyridine and sulfathiazole in every condition investigated. In those conditions in which the diazine therapy was not effective the other sulfonamides subsequently proved to be equally ineffective. A comparison of sulfadiazine with sulfathiazole in regard to their toxic effects reveals the former, sulfadiazine, to be far less dangerous. Sixty-six patients receiving separate courses of both drugs demonstrated 13 instances of untoward reaction to sulfadiazine in contrast to 39 instances when sulfathiazole was used.

In general, the toxic effects with sulfadiazine occurred in only 9.2 per cent of the cases and were of a mild benign type. Patients with definite evidence of renal and hepatic damage were treated with sulfadiazine without further impairment and in a few instances showed actual improvement of the metabolic functions involved during the course of therapy.

POTENTIALITIES OF PREVENTIVE GERIATRICS. Stieglitz, E. J.: New Eng. J. Med., 1941, 225:247.

Geriatrics is that special field of medicine dealing with disease in aged persons. Gerontology is the science of ageing. Ageing begins with conception and continues throughout life. Ageing is the process of living and thus involves both evolutionary and involuntional phenomena. The most significant period from the standpoint of prophylactic geriatrics is the two decades between forty and sixty. In this period involuntional processes begin later to reveal themselves in the more obvious evidences of ageing. Preventive geriatrics cannot stop growing older but it can modify the consequences of ageing and retard the factors that make for premature senescence. Life expectancy in the United States has increased from forty-eight years in 1900 to sixty-three years in 1940. In 1900 only 17 per cent of the total population of the United States was over forty-five years of age. In 1940, 26 per cent was over



this age, and at this rate of increase, at the end of the next forty years 40 per cent of the population will be forty-five years of age or older. In other words, gerontology is no longer merely academically interesting, but an important and vital problem which faces not only the physician but the population as a whole when we consider that our nation is ageing rapidly and man at last lives long enough to have time to think. The physician's responsibility is the greatest, for great longevity without health is not only an individual tragedy, but may develop into a serious evil viciously destructive to national economy.

The problems of gerontology are logically divisible into three main categories:

The first is the biology of senescence as a process. Such problems as the ageing of the individual cell still are not understood. The cancer problem is but a subdivision of this larger question of ageing.

The second category includes clinical senescence in man, which in turn is subdivided into normal and abnormal senescence. Abnormal senescence is conditioned by disorders associated with advancing years. Chronological age as measured in years is not identical with biological age. Physiological age varies with each individual.

The most significant of geriatric disorders are cardiovascularrenal disease, arthritis, diabetes, gout, cancer, and diseases associated with the menopausal syndrome. These diseases of later life are rapidly replacing such diseases as tuberculosis, arthritis, and accidents as leading causes of death.

The third category of gerontology concerns the social economic problems introduced by longevity. Industry is just beginning to awaken to the fact that the average age of its employees is increasing at a surprising rate. Problems of placement, retirement, and conservation of health of older employees in key positions are becoming increasingly urgent. Problems involving social attitudes toward the aged are distinctly pertinent.

It must be remembered that the above three categories are intimately interrelated. Advance in any one field depends on a parallel or preceding advance in the other categories.

At the present time preventive geriatrics is not well practised. Industry is probably doing the best job through employment and periodic examinations, but even here there is much room for improvement as these examinations are not carried far enough in that careful advice about health conservation is usually not given. Preventive geriatrics is probably a public health problem, but it does not fit well into most public health programs. These programs are of the wholesale impersonal type developed for the protection of the community even at the expense of the individual. Preventive geriatrics is always an individual problem. Public health, however, can go a long way in encouraging preventive geriatrics through education of the adult population in the importance of prevention, control, and retardation of chronic progressing disabling diseases of later life and encouraging the periodic inventory. Public health services can go further by developing research into the problems of ageing. Public health can also interest itself in the social economic problem of ageing. Industrial health, housing, nutrition, old-age assistance, cost of chronic illness, chronic disability, hospitals for maintenance, mental health and other considerations are all borderline questions.

E. DAVID SHERMAN, M.D.

Sydney, N. S.



# Personal Interest Notes

## Amendment to the Nova Scotia Medical Act

**I**N order to allow the Provincial Medical Board to graduate physicians who from now on will be taking the accelerated courses at the different medical schools, the following amendment by the Hon. F. R. Davis, was recently passed by the Nova Scotia Legislature: "The Board may, in its discretion, for the purposes of augmenting the supply of physicians available to His Majesty's services, accept as sufficient for the duration of the present war a course of medical study of less than five years' duration conducted by a recognized medical school within the Dominion of Canada."

The marriage took place at Brooklyn, Hants County, on March 21st of Mrs. Elsie Clark of Clarksville, daughter of Mr. and Mrs. George Wallace, Mosherville, and Dr. R. A. MacLellan of Rawdon Gold Mines. Mrs. MacLellan has been the C.N.R. agent at Clarksville for the past two years. Dr. MacLellan has been the local doctor for Rawdon Gold Mines for the past twenty-eight years, is on the staff of the Payzant Memorial Hospital, Windsor, is medical health officer for East Hants, and president of the Hants Children's Aid Society.

Dr. C. Dixon Dobson of Yarmouth will leave in about three months to go on active service in the United States Navy. Although an American by birth, Dr. Dobson graduated from McGill in 1937, and married the daughter of the late Dr. and Mrs. Willoughby Phinney of Yarmouth. Two years ago Dr. Dobson took over the practice of Dr. G. W. T. Farish, now retired.

The BULLETIN extends congratulations to Major and Mrs. B. F. Miller, formerly of New Waterford, on the birth of a son on March 14th, at the Halifax Infirmary.

Dr. C. B. Smith of Goldboro has purchased the residence of Mr. J. J. MacDonald of Pictou and plans to establish a practice in Pictou.

Dr. H. R. McKean, Dal. '34, and Mrs. McKean and their little daughter, Elizabeth Anne, have returned from England where Dr. McKean has been on active service with the medical corps for two years, and have taken up residence in Truro, where he will establish a practice.

Dr. Hugh R. Peel of Truro has returned from Whittier, California, where he was called due to the illness of his mother, Mrs. Weldon S. Peel, who is recovering after a removal of a spinal tumor.

Dr. H. Goldberg of Clark's Harbour is entering the R.C.A.F., and Dr. A. S. Burns of Kentville is taking over the practice of Dr. Goldberg.

Major C. R. Trask, M.D., arrived home in Yarmouth for a few days early in April from England where he has been stationed for over a year.

Dr. Thomas A. Lebbetter of Yarmouth has enlisted in the R.C.A.M.C. (Active) and is at present assigned to special medical duties in the Headquarters Staff Adjutant-General in Ottawa, with the rank of Lieutenant-Colonel. Dr. Lebbetter served throughout the last war with the C.A.M.C.



## Obituary

THE death occurred on April 13th of Dr. Thomas Ross Johnson of Great Village at the age of sixty-two, following an illness of more than a year. Dr. Johnson was born at Brule, Colchester County, October 29, 1880, a son of the late Mr. and Mrs. S. B. Johnson, who shortly after moved to Onslow Mountain and then to Great Village. He received his early education at Truro Academy and went on to Dalhousie University where he graduated in 1904 from the medical school. He began his practice immediately after graduation at Economy and after two years moved to Great Village. Although his medical life was a busy one, he found time to engage in public life and took an active interest in the community life of Great Village. A life-long Liberal, he actively supported the party, and contested one of the seats in Colchester County in the 1933 provincial election. He held the offices of county medical officer and county coroner for many years. He was elected president of the Colchester-East Hants Medical Society in 1939, and for many years was a member of the executive of the Medical Society of Nova Scotia. He was an elder in the Great Village Presbyterian Church, a member of two fraternal organizations, the Masonic and the Oddfellows orders, and took a leading part in their affairs. In addition to his arduous duties as a popular doctor serving a large district and many communities he also operated a large farm on which he lived, owning a highly prized herd of pure-bred Guernseys. A prominent sportsman his hobby was horses, and he owned some years ago several fast stepping horses, which raced on most of the provincial tracks in the harness racing circuit. Interested in clean sport of all kinds his special interests, in addition to harness racing, were baseball and hockey, and in these two sports he did much to develop fine teams from his community. He is survived by his wife, the former Janet D. Drysdale of Tatamagouche, two daughters, Mrs. A. M. Linkletter, Sydney; Elizabeth, student dietitian at the Victoria General Hospital, Halifax; three sons, Arthur, medical student at Dalhousie University, Thomas and Aubrey at home. Two brothers, E. M. Johnson, Great Village and Russell Johnson of New York, also survive.

The funeral service, probably the largest ever held in the village, was on the 16th, when hundreds of friends from far and near in all walks of life gathered to pay their last respects. The pallbearers, all medical men and associates of Dr. Johnson, were Dr. E. L. Eagles, Windsor; Dr. D. Murray, Tatamagouche; Dr. H. B. Havey, Stewiacke; and Doctors D. S. McCurdy, P. R. Little, W. J. MacDonald, J. B. Reid and E. M. Curtis, all of Truro. Interment was made in the Great Village cemetery.