

ANCIENT MEDICINE AND SURGERY AS COMPARED WITH THAT OF THE PRESENT DAY*

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GENTLEMEN: By your kind indulgence it is my privilege this day to greet you, under what are to me trying and at the same time, if I may be permitted to use the expression, most gratifying circumstances, for it allows me the privilege, not only of expressing to you my most sincere thanks for the honor you have conferred upon me, but also my gratitude to those among you who were my teachers at the beginning of my professional career, for the patient and kindly manner in which you labored to graft into my mind those principles of medicine and surgery which have since been my sheet-anchor in times of trouble, and to which to-day with most grateful acknowledgment to you, I attribute my success in life. It is no idle boast on my part when I say that in my wanderings abroad, in my pursuits of medical knowledge at home, and in my efforts to impart what knowledge I could to those who have entered the profession since I, it has not yet been my privilege to see the place that I have more affection for than the old Portland School for Medical Instruction, or to meet men who were the peers of my teachers at that time, in their ability to inculcate into the minds of the student of medicine those principles, not only of medicine, but of all other conditions pertaining to life, which, if he chose to make good use of, would carry him to the front ranks of his profession. Some of them are sleeping their long sleep, but with me—as I hope it is with you all—their memory and their teachings are as fresh as though it were but yesterday—GREEN, the master in surgery, than whom none could excel; TEWKSBURY, the Jack Blunt of the faculty, who, though he could swear with every breath, was still a noble man and teacher; SMALL, the sagacious obstetrician, who could conceal the forceps in his sleeves, and, presto! change! call

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them forth from their concealment, and relieve the suffering mother without her knowledge of their presence. But it is not my purpose to dwell upon the inevitable that is always attended with sadness—except in so far as it will serve my purpose to point out the fact that it is a great pleasure to return, after 15 years' absence, to the scenes of my early struggles upon such a mission as you have honored me with. Not one among your number has less right to expect so great a distinction, not one could have been more surprised by its reception, and I can truthfully say that I have been tempted many times to ask your committee to relieve me from my promise, when the necessity was put upon me of selecting some subject upon which I could ask the attention of this association; and the task became none the less difficult when I made myself familiar with the writings of my distinguished predecessors, and especially when I contrast the address I should like to present, with that which it is within my limited capacity to offer. Therefore, as I proceed, if what I have to say seems to you prosy and illy chosen, I crave your indulgence for a failing with which nature endowed me most plentifully, and that is ignorance. I would do better if I could. Mankind is slow to learn—there is a limit to the knowledge attainable by an individual, and none may hope for the possession of absolute knowledge in any department of human research. If, by diligent and earnest efforts, one should approach nearer the truth than some of those who have journeyed before him, he should justly feel content. If GOETHE could say in his old age, "I have been 50 years learning to read, and I have not learned yet," or NEWTON, after all his achievements in knowledge, could exclaim, "I have only picked up a few pebbles on the beach of the infinite ocean of truth," he who shall in the future discern the truth in the complex phenomena and facts pertaining to medicine must be no ignorant, prejudiced person, biased by preconceived opinions. He must be richly endowed, and largely stored with the wisdom of the past, and keep abreast with the rapidly accumulating knowledge of the present. He must be capable of patient, logical induction, and quick to discover the relations that exist between seemingly unlike conditions. It is fair to believe that not many minds are equal to attaining this standard of qualification, and as I have not, by any process of reasoning of which I am capable, the slightest claim to any such endowment or capacity, I am therefore content, during the time allotted me, to attempt to interest you with a few comparisons in our profession.

It has been said that among the noble professions, that of the ministry takes first rank, with the law a good second, and medicine third. It is only an egotist or one unfamiliar with the early history of the Garden of Eden, as taught by the Scriptures, that would still have any desire, or be so unjust as, to assign our noble profession to a position inferior to that of any other—for it is a well-known fact that

the two most popular persons with each and every member of the human race, as they make their debut into this cold world, are the doctor and the caterer. Only an exceptional few would admit the preacher to a rank with these; and as for the lawyer, could he have been present, his vocation would have been disastrous to the human race, as his only business would have been that of condemning his ancestors to separation for their first sin. So very early in the world's history necessity—that fertile mother of invention, whose varied offspring have so enriched the world—brought forth the science of medicine. It would seem that Mother Eve (even though she first acted as caterer) was largely instrumental in this, and must have played the dual role of physician, for although we do not know how soon she began to treat the bruises of her boys—or search for remedies to ease their aches and pains—we have been informed that she tempted Adam to eat the apple—and, like father like son. We know that the green apple has ever been a source of worry to the mother. It is reasonable to suppose that all these experiences had a place in their lives, and we are led to believe that with the first pains of childbirth there began to develop in the human brain those ideas of relief and prevention which have since, by slow and patient study and experience, developed into our present modern profession. There has been no progress in the various walks of life that can compare with the gigantic strides in the art of modern medicine and surgery—except it be, possibly, the modern harnessing of electricity to the uses of the human race, and in that our profession claims its share.

How has this been brought about—has it been accomplished during the last decade, or even the last century? No; it is the result of patient toil and labor for nearly nineteen full centuries, and not by one nation only, but by the combined efforts of all the nations of this globe—working with the one object in view, that of prolonging life and relieving the sufferings of their fellow-men. It is for the purpose of refreshing our memory and making us conscious of the results of this patient and noble labor, that I have chosen as my subject for this evening "Ancient Medicine and Surgery as compared with that of the Present Day." And when I say ancient I do not mean that as taught a century or two centuries ago, but that which may be found recorded in the Scriptures. The Bible, which is really an epitomé of ancient Hebrew literature, touches life in every phase; although it dwells chiefly upon the religious history of our earliest ancestors it treats upon the political doings of the times and also notes the progress of science and art. The supreme purpose, however, is to chronicle the religious experiences of a nation in its earliest development. It is, nevertheless, no foe to medicine; throughout the whole book the science of medicine is never spoken of in other than words of praise. On the contrary there is no calling in life to which so much allusion is made. In the New Testament, Luke, who was a physician as well

as a historian, makes record of some noted cases. He tells of the healing of Malchus' ear,¹ and in the tale of the good Samaritan² speaks of the use of wines and oils as potent factors in the cure. The wrongdoings of the people are constantly likened to leprosy, lameness, and other diseases. The Greek word from which is derived our word "therapeutics" means also to worship³ as well as heal,⁴ and the terms used to indicate bodily weaknesses and spiritual infirmities are the same⁵; while the lexicon will reveal numerous uses of words to describe both physical and ethical diseases⁶; and everywhere throughout the Bible the honorable profession of the science of medicine is made subject of praise.

Sources of Medical Knowledge.—Among the Hebrews medical knowledge was partly acquired and partly spontaneous, but the latter was never a science with them. Organized knowledge of any kind is not recorded as among the accomplishments of ABRAHAM's descendants before the Christian era. Before the departure of the chosen people from their bondage in Egypt, but little is known of their knowledge of medicine. The births and deaths of men were recorded, occasional cases of parturition are described somewhat at length—as, for instance, the birth of ESAU and JACOB⁷ under peculiar circumstances, also that of poor RACHEL⁸ who gave up her life at the birth of BENONI, the son of her sorrow—while queer conditions of presentation are chronicled at the birth of the sons of TAMAR,⁹ and from which the first-born derived his name. The Egyptians were chief among the nations from which the Israelites acquired their knowledge, as the Egyptian, ÆSCULAPIUS, is by many supposed to have been the author of the oldest Egyptian medical works, whose contents were first engraved upon pillars of stone. Subsequently they were collected and formed a part of the so-called "Hermetic Books," the remains of which are preserved to us in the two papyri of Leipzig and Berlin. The Leipzig papyrus was committed to writing in the 16th century B. C.

While they seemed in no haste to explore the unknown by experiment, they absorbed the results of others' industry as they do to-day, with eagerness—but they were students of good teachers, for the Egyptians were amongst the most enlightened people of the world, and even at that day, 17 centuries before the birth of CHRIST, their knowledge of medicine was sufficient to warrant them in devoting their time to specialties. As HERODOTUS says: "The practice of medicine was divided among them as follows: each physician was for one kind of sickness, and no more; and all places are crowded with physicians, for there are physicians for the eyes, for the

head, the stomach, internal diseases, and the teeth." The skill of these physicians was known throughout the world; they were sent to CYRUS from the land of the Nile, and were constantly in attendance at the court of DARIUS. JEREMIAH alludes to the many medicines of Egypt, and BAAS says: "They were well versed in the use of drugs and had numerous formulas for their preparation. Prominent remedies were opium, strychnus, squill, and vegetable remedies in general."

The Egyptians took a purgative and an emetic regularly three times a month (on the principle that all diseases arose from food and were to be prevented in this way). They cupped by means of horns sawed off near the point. They practiced lithotomy with dexterity; their method was preserved as a secret. They also performed amputation, as pictures found in Thebes and Denderah testify. They were especially skillful in ophthalmic surgery, and it is highly probable that they even operated for cataract, while their skill in embalming their dead is evidenced by the many mummies to be found in Egypt to-day, which have stood the test of time, and remind us of a lost art (that of embalming) of which we would gladly be the possessors.¹⁰

The teeth of some of these mummies bear witness to a skill in dentistry which would make the heart of a modern worker at the art leap with joy could he equal or excel it. The Egyptians did not shrink from human dissection as the Greeks did; and ATHOTIS, son of King MENES (lived, according to BOLKH, B.C. 702, according to SMITH, B.C. 415), was a physician and wrote upon anatomy.

Among such people the descendants of ABRAHAM lived for four and a half centuries. MOSES, who was destined to lead this people out of the wilderness, was learned in all the wisdom of the Egyptians, and history bears witness to his having made good use of it in after-years. But it remained for that same cultured race, who conquered the world with its skill in arts, to give to the profession of medicine the dignity of a science. It is said (BINNEY)¹¹ that during what is known as the inter-Biblical period, that time between the ending of the Old Testament writings and the beginning of the New Testament history, the Hebrews imbibed so much of the teachings of the Greek schools that the practice of medicine in Palestine in the first years of the Christian era was essentially the same as that of Greece. It is but fair to say, though, that not all the physicians of Palestine bore the best of reputations; neither were they noted for their skill, as is made evident in the case of the "woman who had an issue of blood for 12 years, which had spent all her living upon physicians, neither could be healed of any,"¹² but steadily grew worse. It is also noted that quackery was rife in those days, as at present; and King ASA¹³ was taken to task for consulting them; and

¹ Luke xxii, 51.

² Luke x, 33.

³ Acts xvii, 25.

⁴ Matt. iv, 23-24.

⁵ Matt. viii, 17; Luke v, 15, physical; Luke viii, 2, spiritual and 17 times in N. T.; Romans viii, 26; 1 Cor. xv, 43; Heb. iv, 15; Heb. v, 2.

⁶ Mal. iv, 2.

⁷ Gen. xxv, 24-26.

⁸ Gen. xxxv, 16-18.

⁹ Gen. xxxviii, 27-29.

¹⁰ "And they buried him in his own sepulchres, which he had made for himself in the city of David, and laid him in the bed which was filled with sweet odors and divers kinds of spices prepared by the apothecaries' art; and they made a very great burning for him." 2 Chron. xvi, 14.

¹¹ BINNEY: *Transactions of N. Y. State Medical Association*, Mar., 1893.

¹² Luke, viii, 43; Mark v, 26.

¹³ 2 Chron. xvi, 12.

also Job¹⁴ showed his disrespect for his physicians by calling them liars, and considering them of no value.

We find recorded in the Talmud this singular treatment for stone in the bladder: "Catch a louse from a man, and another from a woman; fix the one upon the breast of the woman and the other upon the penis of the man; then let them urinate upon a blackberry bush, while somebody watches whether the stone escapes."

STEPHENS, of Athens, who flourished about 640 A. D. and was a disciple of THEOPHILUS, in his treatise "On the Signs of Virginity," mentions the Egyptian superstition that a reliable sign of virginity may be found in the fact that peas upon which a virgin had urinated, germinate, while the contrary condition of sexual purity may be proven by the failure of the peas to sprout—apparently a very accommodating doctrine when we consider the generative power of peas.

This can be accounted for somewhat when we remember that for a time the priests and prophets were the recognized physicians of the Israelites. Some of their laws, however, regarding practice, if recognized to-day, would give some of our overworked practitioners rest and comfort, while it would bring disaster to others. Any Levite was forbidden to practice who was suffering from defective sight, and no one was allowed to examine a patient in the twilight, or on a cloudy day, while only women were allowed to preside in the lying-in chamber.

In one branch of our profession the Hebrews excelled, and that was hygiene¹⁵. It might be well if some of those now engaged in the Department of Public Health would study well the teachings of MOSES, whose laws have possibly not been improved upon in the nineteenth century. Did time allow, it would be entertaining to review the many rigid rules which it was the duty of the priests to enforce, with reference to the hygienic surroundings and the every-day acts of the people of Israel—indeed they should have been the most healthy and godlike people of the world. In fact, preventive medicine was their forte. In the other branches of the profession they were not so well qualified. Anatomy and pathology were practically prohibited studies with them; for their laws forbade them to touch a dead body under penalty of religious defilement. True pathological conditions of the body internally, of course, under such conditions could only be a matter of conjecture, forever concealed under a veil of mystery. Therefore, when the people were visited by an epidemic of any form of disease (which would to-day be readily understood and successfully combated), it was with them attributed either to our SAVIOUR or his worst enemy, and treated accordingly—with prayers or curses. They were not familiar with the tissues beneath the skin, except by an occasional glance, the result of accident or injuries in battle. So the scientific study

of internal diseases, both medical and surgical, remained dormant for many years, while all forms of external disease were well understood and properly classified, as can be readily verified by a perusal of the Old Testament. Their methods of prescribing naturally depended upon the location of the malady. If the trouble was within the range of vision, it was then considered to be a visitation from the Deity, and the treatment consisted of promises of divine prevention and aid, while with many superstition governed their actions; for we find in the fifth chapter of John the description of a pool called, in the Hebrew tongue "Bethesda," to which journeyed a great many invalids seeking relief, for it was supposed by them that an angel visited the place at certain seasons of the year and troubled the waters. Whosoever stepped in first after the angel, was made well. Not so, however, with diseases upon the external surfaces of the body, for very early in the history of the human race, as I have previously stated, man learned the value of simple remedies; and although their materia medica was indeed scanty, we find descriptions of many compounds of different herbs prescribed for the relief of suffering, while, as to-day, some were thought to be specifics. Anodynes were well understood, and administered to those who were to be put to death, to deaden their pain. This is considered by some writers to be the nearest indication of an anesthetic to be found mentioned in the Scriptures.

Of surgery the people of Biblical times knew but little. Only two surgical operations are mentioned in the Bible, and those were upon males. The one was that of circumcision¹⁶ and the other castration.¹⁷ For the former the instrument used was a sharp stone.¹⁸ Although such an instrument would not stand the test of competition with our present antiseptic clipping-machines, it nevertheless answered the purpose well, for circumcision was done wholesale, as is our present operation of spaying; and it would seem for mercenary purposes as well, for II. Samuel chronicles the fact that DAVID gave King SAUL 100 Philistines' foreskins as a dowry for his daughter MICHAL.¹⁹

In connection with the operation for castration, although no mention is made of the method employed in the Bible, we find in BAAS'S "History of Medicine" that castration was performed by crushing or pounding the testicles, and more rarely with the knife. It would seem that the operation was not looked upon favorably, while, in connection with it, the condition of hermaphroditism was well understood and not relished. Matthew 19 describes the condition, and, after stating that some eunuchs were so born, and some made by man, and others made themselves eunuchs for the Kingdom of Heaven's sake, says, "He that is able to receive it, let him receive it"—indicating that although the LORD did not seem to be displeased, he (MATTHEW) was contented

¹⁴ Job xiii, 4.

¹⁵ Lev. xiv, 34-57.

¹⁶ Gen. xvii, 10-23, 24-27, cxxi, 4; cxxxiv, 14-15; Ex. xli, 48.

¹⁷ Matt. xix, 12.

¹⁸ Ex. iv, 25; Jos. v, 2-9.

¹⁹ 1 Sam. xviii, 23-27; 2 Sam. iii, 14.

with his own condition, but perfectly willing that any man who desired the mutilation should have it.

There is one other surgical procedure mentioned in the Bible which we will not attempt to discuss here, fearing it might cause or give rise to a doubt as to the veracity of the originator—by the nineteenth-century production—of the one whom it was intended for—a new woman out of the rib of man.

There is still another branch of our profession, of which mention is made in the Bible, that I have, so far, only casually referred to. It is the only one in which (to make use of a phrase common among our speculative community) our sister-practitioners of those days could corner the profession. Only women were allowed to practice the art of obstetrics, and this was apparently the law and custom until the time of the departure of ABRAHAM'S people from Egypt, although no mention is made of midwives in the Bible after that time. We know that they survived the passage of the Red Sea, that they flourished afterward, and have continued to, down through all the centuries to the present time. Although the title attached to their profession seems to have long since deserted them, they were then known as "navel cutters." I have been unable to find the recorded date of the first time when they allowed man to share in the honors of presiding in the lying-in chamber, but probably during the time of HIPPOCRATES, as obstetrical operations were then assigned to operative surgery. Since there was no such thing as ordinary male midwifery, the chief function of the latter seemed to be to direct the midwives how to act, but history records the fact that male practitioners were called in to difficult cases.

Of operative midwifery the natives of India in the 16th century B. C. displayed important knowledge. Besides cesarian section upon women who died in the latest period of pregnancy, cephalic and podalic version, embryotomy, embryulcia, craniotomy, etc., were performed.²⁰ The Indians also knew and practiced (though not very satisfactorily) the operative treatment of hare-lip,²¹ rhinoplasty, herniotomy, laparotomy, the extirpation of tumors, removal of the ovaries in women in order to restrain their lust (an operation practiced also for the Lydian kings)—another "modern" (?) operation so early performed!

Such is a brief review of Biblical and ancient medicine and surgery as recorded before the Christian era. I have dwelt somewhat at length upon it in this paper, to show that it is not well nor just for every aspirant for honors in our profession, at the present day, to lay claim to originality with what he considers a new and brilliant idea, or invention, or operation, without being perfectly familiar with the works of those who have labored for the benefit of mankind long years before him, and also that I may be able to ask the question: Are we to-day, with all our brilliant accomplishments, our fine hospitals, and our arrangements for sanitary hygiene, and aseptic methods of treatment, both medicinally and surgically, suffi-

ciently far advanced after 19 centuries of study and experience, to warrant our boasting of our accomplishments and successes in the prolongation of human life, over those of our pre-Christian ancestors? I question if we are. Are we not to-day doing the same work that they did, only perhaps under better circumstances and surroundings? And, if we could have well-formulated statistics of the results of professional work and sagacity of those days—as we have in the present era—could we, taking into consideration the deaths that follow in the wake of the brilliant flash of the scalpel, show a better result in the prolongation of human life in actual number of years and days, than did they? If so, to what can we credit our successes; along what lines have the advances progressed; and to whom must we give the credit? Must we give it to the workers in the early Christian era, or to those of the Middle Ages, or to those within the memory of some of my hearers? I believe to the latter. And why? It would seem that history repeats itself, and that in medicine and surgery, as with other professions and arts, a meteor from the numerous stars flashes its rays far beyond those around it, illuminates the profession for a time, and then disappears, to be repeated again later on by some of those who become impressed by the brilliancy of the former. A perusal of the history of medicine and surgery from the time of the destruction of Pompeii, in the year 79 of the Christian era, to that of the fifteenth century, in which printing was invented and became an art, would seem to bear out this statement. With the destruction of Pompeii and the Alexandrian libraries (642 A.D.) a deathblow seems to have been administered to the literary vitality of our profession; for, although there are still extant the writings of a few brilliant minds, especially among the Greek school, their efforts seem not to be crowned with the brilliant successes that have attended the efforts of a few who will forever stand as monuments for the profession of the nineteenth century.

It would be impossible for me to call attention to the brilliant attainments of all those who have helped to bring modern medicine and surgery to its present standard of greatness. I will, therefore, confine myself to a few comparisons in one branch of the science in which, I believe, greater advance has taken place, more suffering has been relieved, and greater happiness given to the human race than in any other. I refer to the relief given to suffering woman as she passes through that portion of her life, more trying than any other, that from menstruation to the menopause. And *how*, may I ask again, has this been brought about? And to whom shall we give the credit?

In order that we may justly lay claim to this as having taken place during the last century, let us hastily review the history of this specialty up to the present time. We do not propose to lay claim to all that is good and great in this branch for ourselves, for that would be unjust, although it is

²¹ BAA'S "History of Medicine," by HENDERSON.

claimed by some that nothing in the science and art of gynecology that has not taken place during the last century is worth mentioning. He who pins his faith upon his own knowledge and ignores that of those who have worked in the same line before him, is resting his knowledge upon poor foundations, for he cannot afford to ignore the works of CELSUS, who wrote in the first century, and who gave the Greeks at that time credit for making a special study of the genito-urinary organs; or of GALEN and ARETOEUS, who wrote from the middle to the latter part of the second century. In GALEN's writings occurs the earliest allusion to the vaginal speculum; while the writings of ARETOEUS would indicate that he was equally familiar with its use; but we know that neither of these could have laid claim to being the first inventor of such an instrument, for the discoveries in the unearthing of Pompeii, given to us in a recent article in the *Scientific American* from the pen of our esteemed confrère, NICHOLAS SENN, of Chicago, setting forth in his characteristic style the things observed by him during a recent visit to that ancient city, go to show that long before the time of GALEN, or even the beginning of the Christian era, various instruments used in the treatment of diseases of women were invented and in common use, even in the time of HIPPOCRATES. And now, after an elapse of nearly nineteen centuries, they have been resurrected from the ruins of that ancient city in a good state of preservation, and, resting in the Naples Museum, give indisputable evidence of ingenuity and invention, as applied to the treatment of women in those days.

He should also give due credit to ÆTIUS, the Alexandrian student, who wrote in the sixth century upon diseases of women, and whose great work is still extant, although prepared 150 years prior to the destruction of the library, and who in his work devotes 37 chapters to the treatment of pregnancy, parturition, and nursing; 6 to various kinds of ulceration of the womb; 2 to displacements; 2 to obstructed and imperforate anus; 7 to growths occurring in the vagina and uterus; while special chapters are devoted to hysteria, fibrous tumors, pelvic abscess, hematoma, and also to different forms of inflammation of the uterus and its treatment.

Due credit must also be given to PAULUS, that famous man of the seventh century, who stood alone among the Byzantine physicians as a great surgeon and obstetrician, and whose works enjoyed the greatest esteem among the Arabians, were translated by them into their own language, and called the "Books of the Pleiades." From the distinction given to his works we must believe that he was one of the most capable, if not the most daring, operator among the Greeks.

Although little can be found worthy of note bearing directly upon the subject of gynecology, it is not to be supposed that good work was not done in the following centuries, for WRIGHT, in alluding to the loss of acquired knowledge of diseases of women and the disregarding of the teachings of the fa-

mous men of that time for upward of a thousand years, says "that it forms a somewhat curious and significant episode in professional history." He further says, "After the dispersion of the Alexandrian school the professors, though scattered, were received with honor by their Moslem captors, and what they could teach was eagerly sought for, except when it clashed with the precepts of the Mohammedan creed." And so the study of gynecology lay dormant for a long time, for it was against the Mohammedan creed that their women, even in their sufferings, should undergo personal examination except by one of their own sex. So, with the coming of the Arabian schools, although they comprised equally as industrious and accurate observers, owing to their creed there is only a very general mention of the diseases of women; although it is stated that ALBUCHASIS, one of the latest products of the Arabian school, treats at some length upon gynecology. He would seem to have been the first to recommend the use of pessaries.

Many other Arabian writers are worthy of note as authors upon general medical subjects; but it is not my purpose to continue to discuss their merits (for such men builded monuments for themselves better than they knew) except in so far as it will enable me to point out to you who were the men whose brilliancy illuminated the paths of the physicians down through the dark ages to the time when the so-called modern gynecology sprang to the relief of suffering women, brushed away the barriers due to superstition and creed, and rested its banner of hope for future ages on the foundation firmly laid upon true scientific and experimental research coupled with mechanical skill and individual dexterity. It would simply be folly to suppose that there were not thousands of other brilliant minds who, during this time, worked well in the field of literature and obtained much in literary accomplishments, and skillful fingers whose dexterity impressed the age in which they lived; but, as I stated in the beginning of this address, it could only be in the province of a few to so outstrip their fellow-men that their efforts would make a lasting impression upon the human race, and, as all advances in the sciences and arts that have taken place have, so to speak, occurred in epochs, it could be the good fortune of only a few of that great number to build monuments for themselves out of the greatness of their own minds, while for the rest it was ordained by fate that their brilliancy should die with them.

It was only with the coming of PARÉ in the sixteenth century—the son of a barber—that the germ which was in after years destined to be the parent of modern surgery entered the medical profession. By his accomplishments and his writings "he furnished proof that not the most learned but almost exclusively the most gifted have accomplished the revolutions in our profession." His accomplishment will be none the less applicable to some of those I shall have occasion to mention as shining lights in the advancement of our profession in the

present century. Like many great surgeons, even down to the eighteenth century, PARÉ stepped from ordinary day labor to his studies. He acquired his early medical education in the Hotel Dieu. The story of his early struggles, and the many barriers placed in his path, also his final successes, is a most interesting study. He enjoyed the distinction of having held the position of surgeon successively to three kings. He was the first, as far as I know, to use the ligature in amputation. He was also a successful operator in the field of gynecology, and is credited with having been the first to use the suture in the operation of perineorrhaphy, although GUILLEMEAU, a student of his, was the first to really describe the various steps of the operation in 1612.

Time will not allow me to trace the brilliant achievements of the French school. They seem to have been in the ascendancy during the sixteenth and a part of the seventeenth century, especially in surgery, and this was undoubtedly due to the vast experience which they were privileged to get from the many wars in which their nation was involved. But I want to confine myself as far as they are concerned to their achievements in gynecology. Following PARÉ, we owe much to JULES CLEMENT, a famous obstetrician in the early part of the eighteenth century, who was accoucheur to the Queen of Spain and other noble ladies, and who greatly aided the transfer of midwifery into the hands of men. Still later we find that MAURICEAU, who died in 1719, was a man of great experience, but his teachings were confined principally to the obstetrical art. He objected, however, to the operation of cesarian section on the living woman, and in this he was supported by PIERRE DIONIS, who wrote about the same time and whose writings were translated into many languages, even the Chinese. Another vigorous French writer whose works were published prior to those of RÉCAMIER was VIGAROUS. This author writes upon the subject of electricity and describes its manner of use as one of the modes of curing sterility; but the impetus which was given to the progress of practical gynecology by RÉCAMIER and his followers in the early part of the century was succeeded by such brilliant results that one might almost believe that to him was due the title of the Father of Modern Gynecology, did we not know that such a mantle was destined to fall upon the shoulders of one of our own countrymen.

I have thus far hastily reviewed the history of medicine and surgery in a few of its branches from Biblical times to the beginning of the present century, and noted the doings up to that time of a few of that vast number of faithful and patient workers who have devoted themselves to the relief of human suffering and the good of their fellow-men. I have told you of some of their peculiarities, their struggles, the hardships and religious creeds they had to contend with, and also, to some extent, of their successes and the marvelous skill and ingenuity they must have been endowed with to have accomplished what they did so many centuries before the Chris-

tian era, especially as they were obliged to work without the aid of that greatest of blessings to living man, anesthesia, a product of the nineteenth century, and of our own country, without which we of to-day, as did they, might dwell in ignorance of a proper knowledge of internal diseases and the art of relieving many of them by surgical methods. The study was so pleasant and I found so many to whom I wished to give honor and praise that I fear I have allowed myself to dwell too long upon it, and you are already weary before I have touched upon the accomplishments of the present century, or what is designated as the modern method of treatment. You are all so familiar with it that anything I can say will undoubtedly prove prosy; but here I find, as in the centuries that have passed (although I think no one will dispute the belief that the present century has produced more great men than any previous one) the mantle of true greatness—that which shall endure and be handed down to future generations and designate them as lasting benefactors to mankind—is destined to fall upon but few in our profession. Even so, should they alone receive all the praise? Certainly not; rather should it go to their co-workers, whose name is legion; who, although not the originators of the idea, method, or invention, have at once taken it up, worked it over, added to it, or pruned it, until it has taken its place among the great benefits to the people of this world, and then, and not till then, crowned its originator with lasting distinction among his fellow-men.

I have said that progress in our profession has seemed to occur in epochs; and the medical history of so much of the present century would seem to bear me out in that statement, for the present modern art of both medicine and surgery, if I am not mistaken, is the outcome of three great evolutions that have taken place, possibly within the memory of many of those present. I refer to the discovery and introduction of anesthetics by MORTON and SIMPSON, the bacteriological works of PASTEUR, and the antiseptic methods of LISTER.

It is needless for me to discuss them—you know what a lasting benefit was given to us with the coming of each of them. With the discovery of ether and chloroform and their introduction into medicine and surgery in 1846 the greatest enemy to the advancement of our profession in all the past centuries vanished—dread of pain. The skillful surgeon at once undertook and performed feats in surgery which he had never dreamed of before, and the practical obstetrician had a silent friend at the bedside who helped him save many a mother and child whom he would otherwise have lost. The mind of the layman was put at rest—if he suffered, he could have relief without pain, even though the knife cut deep, and he no longer bore with resignation the results of accident, disease, and deformity. At about this time there appeared among us one whom we are to-day proud to recognize as the Father of Modern Gynecology—MARION SIMS—because he justly earned the distinction by his genius and skill, energy

and perseverance; for he brought the practice of gynecology out of darkness into the light, and placed it upon a firm foundation. In his southern town he first worked as a successful general surgeon, operating without the aid of ether. And accident, as with many another surgeon, caused him to stumble upon his method of curing vesico-vaginal fistula. The instrument with which he achieved his success and which remains associated with his name, owed its origin to the necessity of making use upon one occasion of a bent kitchen spoon, and thus originated the now world-renowned Sims speculum.

At this point I want to call attention to the one great factor, and, I may say, the only one, aside from the discovery of ether, that has been instrumental in giving us of the nineteenth century advantage over our ancestors; one which has enabled us to improve upon their methods, to make certain of what they were not sure of, in fact to regenerate, so to speak, every method of practice known to them, and to add for ourselves many methods they could not possibly have been capable of doing; and that aid has been mechanics, as applied to medicine and surgery. It was Sims's skill and ingenuity in the invention of instruments with which to do his work that brought him success and reputation. And so, on down to the present moment, the surgical-instrument maker has been an indispensable aid to the progress of surgery.

Although the works of SIMS did not produce an epoch in the history of medicine and surgery, he so improved, elaborated, and renovated the practice of gynecology as to create an era for that specialty in this country, and place us in the position of teachers of other nations. Working in the same line with him were many others who have placed their names high on the roll of honor. In this country may be mentioned McDOWELL, discoverer of ovariectomy; DUDLEY, of Kentucky; BATTEY, EM-MET, ATLEY, THOMAS, and GOODELL; while of those in foreign countries with whom we are all familiar I may mention KEITH, TAIT, HAGAR, FREUND, SCANZONI, SIMON, SEGOND, MARTIN, and SÄNGER—all men of brilliant minds and skillful dexterity, who have aided in bringing the art of gynecology to its present state of perfection. But even they with all their skill did not begin to get the results that the younger men of to-day secure. And why was this? It remained for PASTEUR, with his culture-mediums and his microscope, to show them the reasons of their failures, and why so many of their cases died of sepsis, and to again revolutionize the methods of treating disease. But he was not a practical surgeon; therefore, it became necessary for someone else to apply his theories to the treatment of disease of a surgical nature, and Sir JOSEPH LISTER was destined to be the man who should advocate and put into practice a method of doing surgical work that, although it has been changed and improved, has not only revolutionized the art, but has brought it to a state of perfection which, it seems to me, it is almost impossible to improve upon.

Of the present moment I need not speak, as you all are familiar with the doings of the day. I have attempted to make a few comparisons between ancient and modern methods in our profession, and show you that the only advantages which we have to-day over our predecessors are due to the aid of anesthesia, a perfect knowledge of germ disease, and mechanics, which have brought to our aid methods of doing absolutely clean work. Let us hope that the successes attending our work will not lead us to deal a blow to further advance, by causing us to become hobbyists and caterers to faddism. Let us also hope that our efforts in the future will be directed toward saving to our fellow-men many of those organs which we now feel it necessary to sacrifice. Let us not remove the appendix for the price there is in it; let us not bring ourselves to believe that every woman who has a pain in her side must necessarily have a kidney fastened; let us make every effort to cure prostatic disease before resorting to castration; let us not take from woman her generative function, if we can, by further study and increased skill, successfully battle with diseased conditions within the pelvis, for which we now so readily sacrifice her uterine appendages.

And now, before closing, let me give expression to the hope that we are at the dawn of another epoch in science which we can apply in our profession, that will accomplish the desired object and again revolutionize for our benefit much of the work of the present day. I refer to the application of electricity, as applied by the Röntgen rays, to the diagnosis of internal disease. It is but an infant, but it is a vigorous one already, and if, with further development, it will show to us diseased conditions for which we are now obliged to make exploratory incisions, or make plain to us the early stages of internal disease for which we can now only comfort our patients with a good guess, or stand as a barrier against the reckless use of the knife for mercenary purposes,—we shall greet it with thanksgiving and call it blessed.

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