

## THE FORGOTTEN MAN IN OBSTETRICS

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“**T**OO often,” said Robert B. Lloyd, “do we forget those who first forced their way along paths which in the future become well frequented thoroughfares . . . too often is the honor due to these pioneers pushed into the limbo of obscurity by the very weight and magnitude of the chain, the initial links of which they themselves had helped to forge.”

It was so in the making of the obstetric science. There have been men whose names are seldom mentioned and whose works are little known, yet they forged the first links in the chain of observation and experimentation and so were an essential part in the making of priceless contributions. They are the forgotten men in obstetrics.

The best robbed man in medical history was Soranus the Ephesian, who lived in the second century of the Christian Era. Throughout ancient and medieval times medical authors were not so meticulous as now in giving credit where credit was due. This, coupled with the singular incident that the books of Soranus “On the Diseases of Women” were unknown to succeeding generations until 1838 when August Lobeck of Königsberg translated them from the original Greek, accounts for the fact that for fifteen hundred years Soranus remained in comparative obscurity, his works garbled by all writers on obstetrics down to the time of Mauriceau at the end of the seventeenth century. It was Moschion, who probably lived in the sixth century, to whom much of the credit was given for the teachings of Soranus.

A disciple of Hippocrates, Soranus is now recalled as “The Obstetrician of Antiquity.” Dissecting the human body he observed that “The uterus is not convoluted as in the brutes but more like a cupping-glass”—this in contradiction to the ancient writers who, failing to dissect the human body, assumed that the uterus of woman had two horns as in beasts. Verification of the observations of Soranus came a thousand years later with Leonardo da Vinci (1452-1519) and Andreas Vesalius (1514-1564) in their graphic portrayals of the gravid uterus.

History records that Soranus was first to instruct midwives in the technic of podalic version, only to have this priceless invention all but discarded till the time of Paré early in the sixteenth century. He employed the knee-elbow position in the puerperium and delivered on the birth stool. While claiming no originality in either of these pro-

cedures Soranus, and before him Hippocrates, anticipated the Trendelenberg position. To replace the prolapsed uterus they bound the knees, ankles and hips to the rounds of a ladder and hoisted the ladder to the gables of the house. It was Soranus, not John Harvie in the eighteenth century, who first instructed midwives how to protect the perineum from injury in birth.

We are wont to think of gynecologic surgery as a modern invention, but there is abundant evidence that Soranus and his contemporaries performed major pelvic operations. Certain it is they performed vaginal hysterectomies—probably by the application of the cautery. Commenting upon necrosis of the prolapsed uterus Soranus said: "The blackened portion is to be resected in the same way as we resect the lobe of the liver or lung which has become necrotic from prolapse." When the Arabs took over the relics of Greco-Roman culture the operative art of the ancients gave way to the branding iron. Said Albucasis, greatest of Arabian surgeons, "The operative Art has disappeared from among us almost without leaving any trace behind. Only in the writings of the ancients do we find some references to it but these, by bad translations, by errors and alterations, have become nearly unintelligible and useless."

The birth figures of Soranus, depicting the fetus in utero in all manner of grotesque attitudes, were credited to Moschion of about the sixth century and garbled and distorted by Rösslin in the *Rosegarten*, published in 1520. They appeared in works on midwifery to the seventeenth century without acknowledgment of their original source. Ludicrous as they appear today they were accepted in good faith until late in the fifteenth century when Leonardo da Vinci sketched the fetus within the uterus lying in its natural position.

Commentators tell us that Soranus was a diligent student of the works of past masters and faithfully acknowledged his obligations to them. It is unfortunate that posterity failed so signally in doing him the honor that was his due. He was above all others *The Forgotten Man in Obstetrics*. But he was not the only obstetrician pushed into "the limbo of obscurity," while credit was accorded to a successor more gifted in the art of publicity or more favored by social and professional contacts.

We have referred to Ambroise Paré who is credited with having revived the ancient practice of podalic version, but Paré, himself, did not lay claim to such distinction. Called by Smellie "the famous restorer and improver of midwifery," Paré confessed that he had first seen the operation performed by Thierry de Hery and Nicole. While failing to popularize the procedure (this was the contribution of

Mauriceau, Guillemeau and Portal) he extended the indications laid down by Soranus by resorting to version in severe hemorrhages and where immediate delivery was imperative.

Nearly a century before Carl Siegmund Credé published "Leitung der Nachgeburtsperiode," in which he described his method of delivering the afterbirth by external manipulations, John Harvie, a modest and retiring associate of Smellie in the teaching of midwifery at Wardour Street, London, and the successor of the Lancashire Scot after he retired to his native village of Lanark, published an unpretentious book entitled "Practical Directions Showing a Method of Preserving the Perineum in Birth and Delivering the Placenta without Violence," London, 1776. While lacking in many of the details, Harvie's work omitted none of the essential features which marked the technic of Credé, whose name is by common consent associated with the procedure. Harvie observed that if the placenta is delivered by nature alone or by gentle external manipulations it will come away inverted. If delivered by force the reverse takes place; that is, the lobular side comes away first. Harvie's work appeared thirteen years before Baudelocque described the two ways in which the placenta extrudes from the uterus and although about one hundred years had elapsed the names of Schultze and Duncan were embodied in the two methods of placental protrusion.

Not alone John Harvie but other obstetricians antedated Credé in the practice of abdominal manipulations in the delivery of the placenta. There were Francis Mauriceau in the seventeenth century, to be followed a century later by William Smellie, la Motte, William Hunter, Robert Wallace Johnson and Charles White. Not to be outdone by the English, it will be recalled that Edward Foster (1781), William Dease (1783), Robert Collins (1835), A. H. McClintock and S. L. Hardy (1848), practiced a somewhat similar procedure, calling it the "Dublin method." In the middle of the nineteenth century John Burns recommended gentle massage of the uterus as soon as the child was born and a few years later Jean Louis Baudelocque endorsed the procedure. Samuel Bard (1742-1821), author of the first American treatise on midwifery, written for the instruction of midwives, said: "By taking it (the uterus) in the hollow of the hand, compressing it moderately, raising it towards its natural position, and at the same time rubbing the surface briskly with the hand, she will soon perceive the womb to contract in size, and to assume the form of a ball of considerable firmness, after this a very few pains will probably deliver the placenta." While authentic records are lacking we may

assume that the art of manual expression of the placenta is as old as human ingenuity.

There is much of romance in the history of ergot. Ranking among the great plagues of earlier times ergotism claimed 400,000 victims in France in 994 A. D., with sporadic recurrences of epidemics on the continent of Europe and in England till well into the nineteenth century. John Stearns (1770-1848) popularized the use of ergot in obstetric practice and defined its limitations, but ergot was administered as an oxytoxic by Joachim Camerarius in 1588, and the midwives of France, Italy and Germany are said to have employed the drug for generations. There is abundant evidence that throughout the middle ages midwives recognized the abortive qualities of ergot and prescribed it in their practice. Stearns tells of his attention having been called to ergot by an old woman who was an immigrant from Germany and probably acquired her knowledge of the drug in her native country.

Scipio Mercurio, a Dominican monk of Venice, Italy, in the sixteenth century, mixed his philosophy and theology with the study and practice of obstetrics. Possessed of all the eccentricities of a genius this monk of the Dominican order paid homage to no authority. To his mind Hippocrates was not infallible, Avicenna sometimes spoke nonsense, Aristotle was not always the wise philosopher and scientist, Averrois was fooled by the old wives' tale that women can become pregnant without a husband when in a bath, Galen was wrong in teaching that the uterus contains separate compartments and that early pregnancy can be diagnosed by the appearance of the urine, and the great Paré was remiss in failing to recognize the hymen.

Mercurio was the author of the first work on midwifery published in Italy. This remarkable work (*La Commare*, 1596) held a commanding position in Italy and Germany for 150 years. Two chapters are devoted to the subject of cesarean section in which the author was the first to suggest the cesarean operation in contracted pelvis. Writing of combined version, now credited to Braxton Hicks, Mercurio said: "The midwife ought to use her hands, whereby she keeps one hand in the birth canal and the other on the abdomen; she may try to turn the child's head downward and the feet upward. It may seem hard for the person who is not accustomed to manipulate but often it is easy to accomplish. One must not be in a hurry or excited but wait patiently until the child is turned." He referred to the "hanging legs" position which Albucasis introduced in the tenth century, and Walcher popularized and was given title to in the nineteenth century. We are familiar with the illustration taken from *La Commare* in which a woman is seen to lie crosswise the bed, the hips elevated upon

a pillow, the legs hanging over the sides of the bed and resting on a stool—this to elevate the sacral prominence and thereby increase the antero-posterior diameter of the pelvis.

Neither Braxton Hicks nor Marmaduke Burr Wright claimed priority in the technic of podalic version, save in the development of certain details in the procedure; each contending for the credit for having first suggested the part played by the external hand in facilitating the turning. That neither Hicks nor Wright is entitled to credit for originating the basic principles of combined external and internal version is clearly set forth in the records. Two and one-half centuries before the time of Braxton Hicks the Dominican monk (Scipio Mercurio) described a somewhat similar procedure in his "Midwife" book and before him Hippocrates, Soranus and Rösslin referred to cephalic version by the cojoined action of the two hands. Wigand described the technic in detail in 1812 and Mme. La Chapelle (1769-1821) referred to cephalic version, only to condemn it.

Hendrik van Deventer of the Hague was first to call attention to the pelvic axis, but he is not entitled to the credit for priority in pointing out that the main cause of obstructed labor is to be found at the inlet of the pelvis. It was Mauquest de la Motte, a country practitioner in the village of Picardy, who is entitled to the distinction. Fashbender says, "History will record a prominent place for de la Motte in the doctrine of the narrow pelvis." This remarkable man made his daily rounds on horseback and in his isolation he acquired a resourcefulness that marked him as an obstetrician of unusual attainments, perhaps the greatest of his time.

Eminent in the field of letters, Oliver Wendell Holmes is credited with having made one of the most signal pronouncements in the history of medicine. His essay on "The Contagiousness of Puerperal Fever" was indeed an inspired document, presented with cogent logic and withering satire. It was an assemblage of evidence gleaned from the literature and from personal correspondence but lacking the background of laboratory research and clinical observations which marked the contributions of Semmelweis. With no thought of disparaging the contributions of Holmes and Semmelweis we recall that at the time Semmelweis was making his observations and experiments in the Vienna hospital, a young intern in the *Maternité d'Paris* was struggling with the same problem and ultimately arrived at almost identical conclusions. Later, he obtained results in the lowering of the maternal mortality of puerperal fever that were comparable to those obtained by Semmelweis. Stephane Tarnier knew nothing of the work of Semmelweis when pursuing his in-

vestigations, yet there was a striking similarity in their methods of procedure and in their results. It was he who introduced the term—puerperal septicæmia.

Not until well into the eighteenth century was there anything approaching a clear conception of the contagious nature of the malady and even then it was not known that the disease could be conveyed from one individual to another. Living in comparative obscurity in the latter half of the eighteenth century Charles White "travelled along unknown paths which later became open thoroughfares." A contemporary of William Smellie and William Hunter, White stressed the retention of the lochia as an etiologic factor in puerperal fever and recommended elevation of the head of the bed to promote drainage; thus anticipating the so-called Fowler position. That he anticipated antisepsis long before the time of Lister is evidenced by the following quotation from his "Treatise on the Management of Pregnant and Lying-in Women," London, 1772: "I must not omit to mention in this place," said he, "the good effects I have experienced from emollient or antiseptic injections into the uterus, by means of a large ivory syringe, or an elastic vegetable bottle. . . . I have by this means known the fever much assuaged, and in many cases wholly extinguished." White stressed the importance of isolation of fever-stricken patients and the disinfection of the lying-in wards, he advocated clean linens and the delivery of women in rooms set apart from the contaminated wards.

In the years 1790-1792 Alexander Gordon of Aberdeen was in the thick of an epidemic of puerperal fever. From clinical and post-mortem observations Gordon arrived at the conclusions that the disease was contagious, that it was a specific disease affecting lying-in women. He pointed out that "the matter is readily and copiously admitted by the numerous patulous orifices which are open to imbibe it, by the separation of the placenta from the uterus."

To Gordon should go the credit of recognizing puerperal fever as a wound contamination and for identifying the carriers of the contagion. Semmelweis believed the virus to be decomposed animal organic matter, which recalls the story that in the ninth century Rhazes, the Arabian, must have associated decomposed animal organic matter with disease. In order to determine the site of a hospital in Bagdad it is said that he hung portions of meat about the city and where the meat was last to spoil, there he built the hospital.

Augustus Hauptman and Christean Langius had the misfortune to be born two hundred and fifty years too soon. Foreshadowing the observations of Schaudinn and Hoffmann they contended that the

venereal poison was nothing other than "a numerous school of little nimble, brisk invisible living things, of a very prolific Nature, which when once admitted, increase, and multiply in Abundance; which lead frequent Colonies to different Parts of the Body; and inflame, erode, and ulcerate the Parts they fix on."

Their contemporary, John Astruc, physician to Louis XIV, retorted: "If it was once admitted, that the Venereal Disease could be produced by invisible living things swimming in the Blood, one might with equal Reason allege the same Thing, not only of the Plague . . . but also in the Small Pox, Hydrophobia, Itch, Fetters and other contagious Diseases . . . and thus the whole theory of medicine would fall down." Two hundred and fifty years later, says Howard Haggard, "Pasteur demonstrated that contagious diseases were caused by little living things, bacteria." In 1905 Schaudinn and Hoffmann found the organism of syphilis "swimming in the blood" . . . and revealed their "very prolific Nature, which once admitted, increase and multiply in Abundance; which lead frequent Colonies to different Parts of the Body; and inflame, erode and ulcerate the Parts they fix on."

We are told that "He who cannot render an account to himself of at least three thousand years of time, will always grope in the darkness of inexperience and merely live from day to day." This is but another way of saying that the achievements of today are deeply rooted in the past.

#### DISCUSSION

DR. P. BROOKE BLAND, PHILADELPHIA, PA.—Historically there is a large group of individuals in medicine who stand out vividly, figures of both men and women whose presence we effortlessly see and feel. They can never be forgotten, because creative individuals are immortal. Even with the ever widening orbit of scientific achievement, the great physicians of the ages past will forever hold the center and we are indebted to Dr. Findley for bringing some of them here this morning.

Hippocrates and Sydenham, generally regarded as the fathers of clinical medicine, and Imhotep, the great grandfather of medicine, as pointed out by Litzenberg at our annual meeting in French Lick Springs three years ago, loom larger today than ever before.

The venerable plane tree on the Island of Cos, traditionally called the Hippocratic consulting room, is the mecca of pilgrims from all parts of the world. Who among us could visit Florence or Geneva without realizing fully that the ordeal of fire did not destroy Savonarola or Michael Servetus? It would be wholly impossible to visit the vine clad hills or the glorious lake region of Italy without feeling keenly the intimacy of Malpighi and Fracastoro. A visit to the Place de la Concord ever brings to memory the blood stained guillotine, but Lavoisier still lives nor can he ever be forgotten. A visitation to the wards of the Hotel Dieu in Paris always brings to view the heroic figure of Ambroise Paré.

Who among us can survey the corridors of a city hall without recalling the humble janitor Leeuwenhoek, in the old municipal building at Delft, or visit the amphitheatres of Padua and Sienna without visualizing therein the imposing frame of Vesalius? Who among us could walk the streets of Leyden or Uppsala without feeling the companionship of Boerhaave and Linnæus? In a corner of a little park in Budapest converse is made with Semmelweis by the passing throngs through every passing minute of every passing day. Oliver Wendell Holmes is the companion of each one of us during that early morning ritual, inaugurating for us the prelude to simply another day.

I am glad Dr. Findley has presented a paper dealing not with the cold scientific aspect of medicine, as important as this is in our every day work, but one reaching out into the historical and cultural phase. Ours is a precious heritage and we have a pedigree in which we may justly hold the deepest pride.

It is, I think, quite apparent to all that the historical feature of medicine is receiving infinitely more consideration than ever before. Both in this country and abroad, historical sections are now a part of nearly all scientific bodies. Of all the topics considered, the records of men and their accomplishments are incomparably the most absorbing and interesting, exemplifying the age old axiom that the proper study of mankind is man.

Two months ago I visited Oxford during the 104th annual meeting of the British Medical Association. As usual with that august body, a fine scientific program was presented, but the feature that aroused the greatest interest and widest comment, editorially and otherwise, was an exhibition in the Bodleian Library of the works of the masters all the way from Thomas Linacre to William Osler. In addition, there was on exhibition an English manuscript dating back to the tenth century and also a thirteenth century illustrated volume on "Dissection." Works of not forgotten, but never to be forgotten figures in medicine. It is wholly impossible to study the compilations of our forefathers as found in the partial list of names enumerated by Dr. Findley without being inspired by their simplicity, and especially by their literary elegance. Duncan's work, to me, stands out as one of the superlatives of our English tongue.

Dr. Findley, in introducing the cultural phase of medicine in our 1936 program, had clearly portrayed the character and work of a long list of conspicuous figures, especially those linked indissolubly with our specialty.

Because of the limited time allotted to my discussion, I should like to refer briefly to only three included in the group presented by Dr. Findley: First, William Shippen, Jr.; second, Samuel Bard; and third, Charles White. The first because he was the first to teach scientific obstetrics in the Colonies and also because he was the second in seven generations of American physicians bearing his name. The second because he published the first work dealing with obstetrics in our country, and the third, because he was the first, antedating Holmes and Semmelweis by almost three-quarters of a century, to call attention to the gravity and the means of preventing puerperal septicemia.

1. William Shippen, Sr., was born in Philadelphia on October 1, 1712. He studied medicine with Dr. John Kersley, Jr., and soon thereafter "became uncommonly successful and rose to high reputation. He was one of the founders of the College of New Jersey, now known as Princeton University, was first physician to the Pennsylvania Hospital and a Trustee of the College of Physicians of Philadelphia. He never in the course of his life, it is claimed, was once heard to swear profanely, and never drank wines or spirituous liquors. He wore a ruffled shirt and had an unruffled temper. He was a firm friend of Whitefield,



the Methodist reformer. He departed this life on November 4, 1801, being buried by the side of his six grandchildren and followed by a large train of his mourning relatives and friends." That in brief is the biography of Dr. William Shippen, Sr., the father of the man who gave the first course of lectures on obstetrics in our country.

William Shippen, Jr., was born in Philadelphia on October 21, 1736. After graduating at the College of New Jersey, now Princeton University, in 1754, at the age of eighteen, he studied medicine with his father for four years, or until 1758. He then journeyed abroad to complete his preparation for medical practice. In London he studied with the Hunters, William and John, with John Pringle, William Hewson and John Fothergill, the celebrated Quaker physician and the intimate of Benjamin Franklin. It was Fothergill who sent with Shippen the renowned anatomic plates or crayons to the Pennsylvania Hospital, still today the priceless treasures of that venerable institution.

Before returning home, Shippen obtained his medical degree from Edinburgh University. Here he studied under Alexander Munro, the first, and also under Cullen. He visited Paris and came in contact with the celebrated French physicians of that period. In 1762 he returned to Philadelphia, bringing with him the Fothergill anatomic and obstetric crayons. On the 11th of November, 1762, he announced through the newspaper, his first course of lectures on anatomy and midwifery. These were conducted in the home of his father on Fourth Street, just north of High, now known as Market Street. The first course of lectures was attended by ten pupils, but the classes increased rapidly in number. The public was greatly opposed to dissecting at that time and the project met with violent opposition on the part of the populace. He finally overcame the prejudice of the public by announcing in letters published in the newspapers that "the bodies used for dissection were those of persons who had committed suicide or who had been legally executed, with every now and then one from the Potter's field."

In 1765 he began his University lectures in obstetrics, the first systematic instruction given in this country. In connection with his lectures he also established what was perhaps the first "lying-in hospital" in the Colonies. This, it was announced, was "under the care of a sober, honest matron, well acquainted with lying-in women." It was William Shippen, Jr., and his friend John Morgan who established the first medical school in our country in connection with the College of Philadelphia, known today as the University of Pennsylvania. Morgan became the first Professor of Medicine and Shippen the first Professor of Anatomy, Surgery and Midwifery. Dr. Shippen served as physician to the Pennsylvania Hospital in 1778 and 1779. On April 11, 1777, he was appointed to succeed his friend Morgan, physician-in-chief of Washington's Army.

Wister in a pen picture says: "In his person Shippen was graceful, his manners polished, his conversation various and the tones of his voice singularly sweet and conciliatory. In his intercourse with society he was gay without levity and dignified without hauteur or austerity. He was particularly agreeable to young people. Known as he was to almost every citizen of Philadelphia—20,000 in all—it is probable there was no one who did not wish him well." Dr. Shippen was not a frequent contributor to medical literature and I have been able to find only six simple pamphlets on file in the Library of the College of Physicians of Philadelphia. Nevertheless, Dr. Shippen will go down in history as one of the outstanding pioneers and founders of American medicine.

2. Samuel Bard was born in Philadelphia on April 1, 1742. His father, Dr.

John Bard, is memorable for being the first person who performed a dissection and taught anatomy on this side of the Atlantic.

Samuel Bard studied medicine with his father. He sailed for Europe to complete his medical education in 1760, but being captured by a French privateer he was taken to Bayonne and confined for six months in the castle. Upon his release in 1761, he became, through John Fothergill, assistant to Dr. Russell in St. Thomas's Hospital, London. He studied medicine in the University of Edinburgh and graduated in 1765; returning to this country that year he started in practice with his father. Following the establishment of a medical school in Philadelphia, New York almost immediately followed by opening a similar institution in 1768. Dr. Bard was immediately appointed to teach the theory and practice of medicine. In 1792 he became Dean of the faculty of Columbia University. Throughout his career his favorite branch was midwifery, and after retiring to the country, he published, as he had long planned, in 1807: "A Compendium on the Theory and Practice of Midwifery." This was intended chiefly for the use of midwives and young practitioners. It was the first literary work published on obstetrics in this country. It passed through five editions and the sixth edition was in the course of preparation at the time of the death of Dr. Bard on May 24, 1821.

3. Charles White was regarded as the most eminent surgeon of the North of England. He was one of the pioneers of aseptic midwifery and gave the first account of *phlegmasia alba dolens*.

He antedated Holmes and Semmelweis in the study of childbed fever by nearly seventy-five years and he may be regarded as the first physician to outline the gravity and the means of preventing puerperal infection. He was among the first to appreciate the seriousness of lochio metra and it was he who designed the postural method of pelvic drainage. In this regard White antedated Fowler by at least one hundred and twenty-five years. His book: "A Treatise on the Management of Pregnant and Lying-in Women and the Means of Curing, but More especially of Preventing the Principal Disorders to Which They Are Liable—Together with Some New Directions Concerning the Delivery of the Child and Placenta in Natural Births," published in 1773, is one of the great classics of obstetric literature. Charles White stands today more than ever before as one of the towering figures in obstetric science.