Lecture introductory to the course on obstetrics, and diseases of women and children : in the University of Pennsylvania, for the session of 1836-7 / by Hugh L. Hodge.

Hodge (H. L.)

LECTURE

INTRODUCTORY TO THE COURSE ON

OBSTETRICS,

AND

DISEASES OF WOMEN AND CHILDREN,

IN THE

University of Pennsylvania,

FOR THE SESSION OF 1836-7.

BY HUGH L. HODGE, M. D.

PUBLISHED BY THE MEMBERS OF THE CLASS.

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1836.

At a meeting of the Medical Class of the University of Pennsylvania, held on the 8th instant, T. L. Haile, T. F. Willis, J. K. Barnes, J. B. Jones, G. W. Thornton, J. A. Weidman, and Geo. W. Peters, were appointed as a committee, to request of Professor Hodge a copy of his chaste and appropriate Introductory Lecture for publication. Having been addressed by the committee on the subject, Prof. Hodge returned the following answer:

Philadelphia, Nov. 12, 1836.

Gentlemen:—

In compliance with the request of the medical class of the University of Pennsylvania, which I have had the honor to receive through your note of the 8th instant, I transmit a copy of my Introductory Lecture for publication.

Accept the assurance of my personal respect, and believe me

Your's, very respectfully,

HUGH L. HODGE.

To

Messrs. T. L. Haile, T. F. Willis, J. K. Barnes, J. B. Jones, G. W. Thornton, J. A. Weidman, and Geo. W. Peters.

INTRODUCTORY LECTURE.

Gentlemen of the Medical Class—

You have already been welcomed to these Halls of Science by my friend and colleague, the professor of practical medicine.

While reiterating with sincere pleasure, the welcome he has given, I must introduce to your attention that branch of medical science which in this University has been committed to my care, and which, it therefore becomes my duty to explain, illustrate, and enforce, for the improvement of those who may favor us with their attendance.

This duty is an arduous one. It becomes so, not so much from the inherent difficulties of the subject, great as these may be, as from the responsibilities which must weigh on the mind and heart of every one who presents himself as a teacher in medicine. Perhaps, few of you have reflected seriously on the great responsibility involved, even in the practice of medicine—how much the happiness of families and of communities, is connected with the opinions and practice of individual physicians—even of those whose names are altogether unknown to fame, and whose ambition may be of the humblest character.

The ignorance or carelessness of a medical attendant may be, (and, alas! too often has been,) the determining cause of the incurable character of disease, and even of the death of a patient—and that patient a father, or mother, on whom a family is dependant for support and guidance—a citizen, or

magistrate, to whom a nation may look for protection or deliverance. In all the business of the physician, these feelings of responsibility are deeply involved and often dreadfully harassed. He knows how important to his patient, either for weal or woe, is every opinion he may entertain, and every direction he may give.

If such be the responsibility of practitioners of our profession, how much greater are those incurred by the teacher in medicine, especially when he casts his eye over a large class of young men, candidates for medical honors, and for professional duties, and realizes that the formation of the opinions by which they will be governed in the practice of medicine, will be regulated materially by the instruction he may impart. The whole tenor of their professional life, with all its immediate and remote bearings on the interests and happiness of society, all its influences for good or evil, will be modified by their medical instructor; who must, therefore, be deeply involved in the responsibility which his pupils will hereafter incur, as practitioners of medicine. Nor is this all, these pupils will become, not only practitioners, but many of them, teachers in medicine, to exert a similar sway over the minds of other generations. Hence, the influence of a teacher may be indefinitely multiplied, and be so powerful as to impress the character of his mind and opinions on the nation to which he belongs.

Illustrations of the truth of these remarks might easily be drawn from the history of our profession. It could be shown, that the sentiments of an Hippocrates, a Galen, a Celsus, a Bœrhaave, a Cullen, a Brown, and a Broussais, have had important and enduring bearings on the welfare and interests of society. To you, however, the illustration will be more familiar, when we remark, that in this country a few physicians, comparatively, have given origin to what is now termed "American Medicine." And may we not, gentlemen, without the charge of vanity, and with a laudable pride, refer to our predecessors in this University, as the chief and important

contributors to the formation of the medical character of our country. Who has not felt the influence exercised by a Rush, a Physick, and a Dewees, over the practice of medicine, of surgery, and obstetrics, in these United States of America? An influence, which has not only pervaded every portion of our country, but which will probably be felt, though it may be unacknowledged, even to the remotest posterity.

The duty, therefore, which we have to perform, is arduous, and occasionally, oppressive: and while we appear before you under a sense of this responsibility, permit us at once to discharge a portion of our obligations, by exhibiting the high character of the sciences we teach, and hence, the nature of the duties which will hereafter devolve on you as practitioners of the healing art. You cannot succeed in any important undertaking, especially in the pursuit of science, without acquiring clear ideas of its nature, an adequate impression of its importance, and a fixed determination to employ the means requisite for its attainment. You have commenced an important, a responsible profession—investigate, therefore, at once, the nature of the several sciences of which it is composed—form correct and elevated notions of their value, and determine that all the energies of the youthful mind, shall be industriously devoted to the accomplishment of your high and noble aspirations.

Let us, therefore, actuated by these general principles, form some definite idea of the nature of Obstetrics, one of the grand divisions of medical science, and let us illustrate its importance, that we all may be stimulated to the due performance of our respective duties, as teacher and students.

Our science, formerly termed Midwifery, has of late years been more generally distinguished by the name of Obstetrics, from the Latin word obstetrix, signifying a nurse: intimating that at the period of parturition, females are peculiarly dependant on their friends for direction and assistance. It is also termed, and this more correctly, by a late author, Velpeau

"*Tokology*," from τικτω, pario, to bring forth, and λογος, verbum, a disputation—discourse. By the French, physicians who attend parturient females are termed *accoucheurs*, as assisting at the bed-side, and delivery is termed an accouchment.

All these expressions, have relation, as may be observed, simply to the process of parturition—the mere act of delivery, and give therefore, but an inadequate idea of the extent and importance of the science we teach. Obstetrics, it is true, regards the act of delivery, but it also takes cognizance of all those wonderful phenomena which are manifested in the female economy from the moment of conception, (when a new being, by a divine agency, is created within the recesses of the female organs,) through all the various steps of embryotic and fœtal existence, to that full period of utero-gestation, when the now matured fœtus seeks a new state of existence, and is capable of exercising new and important functions.

Obstetrics examines with scientific accuracy the minute and varied changes which occur during the process of delivery, in the condition of the child and its parent—ascertains what are the fundamental laws which regulate this important process, studies all and every deviation, however minute, from the natural course of parturition, and hence deduces those rules for practice, which render our science so eminently useful, so important to the welfare of the community.

That these great objects may be accomplished, the scientific obstetrician must carry his observations to a still greater extent. He must not only be acquainted with the other branches of the profession of medicine, and with the learned physician and surgeon, run the circle of science, becoming conversant more especially with the sciences and arts which may directly or indirectly prove useful to the medical practitioner—but he must, in addition to this varied information, make himself familiar with every thing which characterizes the female sex—he must study particularly all her anatomical and physiological pecu-

liarites, and be able, in some degree at least, to follow the changes which are ever occurring, in that most susceptible and, at the same time, most interesting, of all animated beings.

So extensive is the business of the Obstetrician; but you all know that to the chair which I have the honor to occupy in this University, has been confided the *Diseases of Females and of Children.* Hence an additional series of duties will be found in investigating the connection between the physiological character of the female system and the pathological changes to which it is liable—in observing how even common diseases are modified in women and how many are almost peculiar to them—at least, most intimately associated with their peculiar organization. The diseases of infants open another large field for investigation, as their systems, their mode of living, their age, and their great delicacy and sensibility modify, in a great degree, the results of diseased irritations and therapeutic agents, on their tender frames.

From this general view of the nature of obstetric science, it must be immediately manifested that it is one of great extent, of peculiar character, and of immense importance: that it is not of easy attainment—not an art which may be fortuitously acquired by any one, however ignorant, or practised with impunity to the interest of society, by those who have no knowledge of the medical profession. The idea has been too long entertained that any one can practice midwifery—that because our Creator has wonderfully adapted the means to an end, and established parturition as a natural process, that therefore the most ordinary attentions which can be paid to a suffering female by the most aged and decrepid of her sex, are abundantly sufficient for her comfort and safety. The reverse of all this is true. In no department of the profession, will you, gentlemen, find more demands made on your time, your talents, your knowledge, your dexterity, than in that of obstetrics. In none, will those high traits of moral and intellectual character which must always mark the eminent physician, and the distinguish-

ed surgeon, be more frequently or more powerfully called into requisition. However natural may be the process of delivery, however in accordance with the fundamental laws of the female economy, yet occasions are continually arising, in which the lives of the mother and the child are involved in the immediate decision of the accoucheur; when there is no time for consultation with books, or with men, no time even for reflection; when all hope is suspended on immediate and decisive action, and when this action, to be beneficial, must be in accordance with the principles of science, and be suitably adapted to the emergencies of the case. Imagine what must be the feelings of that individual, whether bearing the insignia of the medical profession, but ignorant of its principles, or a presuming empiric, who is witnessing the powers of life rapidly failing, in a case of hemorrhage or convulsions—while he knows not how to afford the requisite assistance, and merely adds to the panic of surrounding and despairing friends, by his hesitating deportment and his ineffectual, because ill directed, efforts to relieve.

Form then, high ideas of obstetric science, and believe one who speaks from much observation and experience, that however easy it may be to acquire a few general rules for your conduct in the chamber of female suffering, by which the ordinary duties may be discharged and the good opinion of ignorant friends and attendants be secured, it is a most arduous undertaking to become *master*, theoretically and practically, of those facts and principles which will carry you, with a safe conscience, through all the difficulties which will meet you in the practice of midwifery. These observations are now made, not to discourage you at the commencement of your professional studies—not to damp the ardour of youthful feelings, or the warm enthusiastic aspirations of a genius, perhaps yet untried in the rugged walks of science, but they are thus firmly stated, that you may not be deceived--that you may not neglect the opportunity now afforded of studying the fundamental principles of tokology, of

laying deeply the foundation stones of this fair temple of science, under the false supposition that it is easy at any time to raise the superstructure, and to attain all requisite knowledge upon this branch of practical medicine. It is an axiom, that he who is ignorant of the principles of a science, cannot practice it with safety; and it is almost self-evident, that he, who when a student, does not attain clear notions of the essential and fundamental points of obstetrics, never will fully understand this subject, or be a safe practitioner.

That the importance of this branch of medical science may be more fully illustrated, and that you may be induced to afford it that diligent attention which is requisite for its attainment, let us spend a few minutes in contemplating that being whose sufferings and diseases constitute the main object of the ensuing course of lectures.

When the name of *woman* is pronounced, what delightful associations are instantaneously excited in every ingenuous mind! How rapidly do our thoughts recur to all the pleasant and soothing delights of the domestic circle, and speedily recount the inestimable blessings conferred by a benevolent Creator through the instrumentality of woman. She is indeed the help-mete for man. Within her economy, he was created and sustained during his embryotic and fœtal existence. On her breast he was nourished and sustained in infancy. She watched over, guided and protected him in childhood. She becomes the companion of his fortunes in riper years, rejoicing with him in prosperity, and comforting him in every hour of disappointment and trial. She becomes the mother of his children; the head and the heart of his domestic enjoyments, and, when age and infirmities weigh heavily on him, woman still appears at his side to meet every want, to furnish every consolation which mind and body may demand.

Thus admirably adapted by Providence to fulfil her destiny in the scale of existence, she however, in many and important respects, differs from man. These differences have regard not

only to sexual peculiarities, so termed, but to the whole being, anatomical and physiological, physical and mental. Without professing to be minute, let us glance at some of these characteristic traits, that we may be better prepared for our future studies in this department of medical science.

It has been often said, that all the peculiarities of females depend on the uterine system:—"Mulier propter uterum condita est." Without defending the precise accuracy of this assertion, there is, doubtless, an intimate connection between the development and healthy state of the uterus and those of all the organs of the economy. Hence, during infancy and childhood, when the uterus and its appendages are exceedingly small and inconsiderable, the differences between the sexes are trifling, as regard body and mind. There is the same general conformation of the limbs and of the body—the same muscular outline apparent; the motions of either sex are usually awkward—and girl associates with boy, with all the freedom and innocency of a primeval state of existence.

At the period of adolescence or puberty, a most wonderful transformation is manifested in both sexes, especially in the female, and their characteristic traits are rapidly developed, and decidedly and permanently established.

Many of these changes we shall hereafter specify minutely.

In general, it may now be observed, that all portions of the animal fabric are modified by the influence of sex. Contrasted with the male skeleton, that of the female is distinguished by the smallness and delicacy of the bones, by the diminutive size of the head and chest, and by the greater proportional development of the pelvis, by the length of the body and shortness of the limbs. Distinctive traits may be recognised through almost all the tissues, depending chiefly on greater delicacy of structure, and on diminished size. The skin is more white and delicate; the hair, long, fine, and flexible; the cellular and adipose tissues are far more abundant, filling up the interstices of the muscles, and the inequalities of the body and limbs; and

affording that beautiful rotundity which is so characteristic of the female, and which has been so much admired. The muscles are less developed, and less prominent; the brain, heart, lungs, larynx, and other viscera are comparatively small; while the nerves of sensation and motion are more developed in proportion, than in the male sex.

It is a remark also worthy of observation, that the relative proportion of solids and fluids differs in the two sexes. In females the fluids abound; there is more abundant secretion in almost all the tissues; the insensible perspìration and the sebaceous secretions of the surface are greater; imparting a mobility, softness, and delicacy to the skin, so characteristic in woman, and which differ little from that found in infancy. So also of the mucous and serous tissues. The secretion by the kidneys is much more copious, and is so much influenced by their nervous system, that almost every fluctuation of feeling speedily interests the urinary evacuations. In addition also, to the secretions existing in the male sex, there are in woman two additional functions: one attending on her virgin condition, the other manifested on that interesting occasion when she becomes a mother, and supplies the first nutriment suitable for her offspring. For the supply of all these demands, and for maintaining a greater softness and flexibility of her tissues, there is a larger proportion of blood and other fluids in the female economy.

The physiological peculiarities of females, are founded on their anatomical arrangements, but are more decidedly characteristic.

The abundance of their cellular and adipose tissue, accompanied by the free secretions which have been mentioned, gives great softness and flexibility to the surface, contributes to the beauty of form, which in all countries marks the female sex, and greatly facilitates the grace and delicacy of her movements. Her muscles want vigour, as may be inferred from their comparative size; the pulse is smaller, weaker, and more rapid

than in the male; her voice is distinctive, although changed at the period of puberty, it still maintains most of its infantile softness. It is much more acute and shrill than in the male; it wants force, but imparts tenderness and softness to the words of woman; the sound is said to be an octave more acute than ours: all depending on the small size of the os hyoides and the larynx, the narrowness of the glottis and the want of that development which gives the strong, commanding tone to the male sex.

The great physiological distinction in the constitution of females, relates to their nervous system, especially to the cerebro-spinal system of nerves. It is endowed with a wonderful sensibility. Slight causes make powerful impressions, and are followed by great disturbances. Every sense in females is delicate and acute; they see and hear quickly; their smell and taste are fastidious; and their touch exceedingly discriminating. Their cerebral perceptions are quick, almost intuitive. They perceive and think rapidly; it may be, not profoundly; of course, decide immediately. Cerebral excitement is readily produced by moral or physical causes. Slight irritations, whether external or internal, from the condition of the heart, stomach, uterus, or other viscera, make comparatively a powerful impression on the female brain. You all know how true this observation is, as regards moral causes: the various affections and passions of the mind—how strong an influence do they exert over the nervous system of the sensible female? how easily are their feelings and affections moved; with what warmth and enthusiasm do they cultivate all the domestic and social affections; how easily are their sensibilities disturbed; how quickly are they softened and allayed; how rapid the transition, from the greatest excitement to the lowest depression—from joy to sorrow.

From this excitable condition of the brain, the centre of the nervous system, the radiations by means of the spinal marrow and nerves to all parts of the economy, are proportionately

quick, lively, and disturbing. Sensations in the female are much more acute; she suffers much more than man from ordinary irritants; and when strong impressions are made, her agony is often extreme, sometimes intolerable, so that convulsions and death ensue. All her movements indicate the excitable condition of her nervous system; her motions are graceful and rapid; her voice, from this cause, is more capable of nice modulations; and hence, also, females are so liable to those numerous disturbances of the muscular system, which constitute the varieties of Hysteria, varying from the most trifling subsultus tendinum, oppression of the heart, or sense of oppression at the precordia—to those terrific convulsions, which, commencing with a sense of suffocation, soon agitate and distort every muscle and feature, and for the time, induce a suspension of consciousness, and a partial arrest of the functions of animal life.

The temperament, therefore, of females, is almost universally *nervous*, and constitutes another strong similarity to the constitution of infants.

From this review of the peculiarities of the different tissues and organs of females, certain general propositions may be made, perhaps without fear of contradiction.

Females are more feeble than men. This is naturally inferred from the smallness of the osseous fabric; from the diminished size of the chest and limbs; and from the want of development of the muscular tissues. Actual experience and observation, no doubt, confirm the inference which anatomy would thus make. Still, however, it has been denied, even by philosophers, who maintain that the apparent difference as to strength, between the two sexes, depends on education:—that if girls were brought up as boys, and from early infancy accustomed to exercise their minds and their muscles, in study or in labor, that what are termed general peculiarities of sex would disappear. Appeals are actually made to facts to support this argument; and certain females, who by nature were

unusually strong, and who by the force of circumstances have been compelled to labour severely, have been adduced as confirmatory of their opinion, of the equality of strength in the two sexes. But the answer is easy:—These viragoes are but mere exceptions to the general rule, and after all, are inferior to their robust male companions similarly circumstanced. Our appeal is made to the original conformation of the male and female fœtus; to their respective character, anatomical and physiological, at the time of birth, as well as to those differences in riper years which have been already specified. In all ages and countries, the physical weakness of females has been manifested by their universal subjection to the male sex; and that this is founded in nature is confirmed by reference to the inferior order of animals, where it will be very generally observed, that more size and muscular development is accorded to the male sex.

This natural constitution of the sexes, renders females subject as far as mere physical power is concerned, to man. And this idea is not weakened when we examine the mental peculiarities of the sexes. On this point much has been said and written. Suffice it for us, to state, that there is no doubt an important difference, without venturing to decide a point on which philosophers have disagreed. This difference seems dependant on the anatomical and physiological condition of the brain and nerves to which we have alluded. The cranium, and of course the brain of the female is proportionally smaller than in the male sex; and there is more irritability and sensibility in the medullary mass. Hence, it would seem that anatomical investigations would confirm the idea generally embraced, that females are infirm in point of strength of mind —but have more quickness of perception and vivacity of thought than males. They may not be capable of investigating so closely, or of thinking so profoundly, or of reasoning so logically, as man—but they perceive more quickly, decide more hastily, and often as correctly; have more taste, spright-

liness, and imagination:—making delicate discriminations where the rules of logic can hardly be applied. It is true, that education has great influence in regulating and modifying natural propensities; and that there may be, and have been, examples of great mental superiority occurring among females. Still the general truth already stated, seems to be apparent, that power, or strength of mind and of body, belong, by the original fiat of the Creator, to man; and hence, that females being truly the weaker sex, are dependant on their more robust companion for support and protection.

It was, however, only in the early stages of society, or among barbarians of past or present times, that woman is held in any thing like subjection. Wherever civilization and religion have extended their influence, woman has always exerted a controlling influence over the interests of society, and the destinies of nations. Her beauty and grace, the softness and delicacy of her figure, the captivating loveliness of her expressive countenance, her sprightliness and wit, her warm imagination, and above all, the warmth and devotedness of her affections, have always subdued to her wishes that sex, who might otherwise have exerted dominion over her destiny. Man may govern by his mental and corporeal powers—woman does govern through the medium of those indescribable sentiments and passions, which are universally excited in the breast of man by her physical and moral excellencies.

Hence, the great source of female power, and the importance of the station she occupies in society. Let it be remarked, moreover, that by the arrangements of Providence, females have almost the entire superintendence of man in the infancy and childhood of his being; that hence, the formation of the physical and mental character depends greatly on the influence of the mother. She educates her offspring; she gives direction to the young mind; she "teaches the young idea how to shoot;" and casts her progeny into the mould of

her own character. Physiologists, moreover, contend that however great may be the influence exerted by the father over his progeny in the act of generation, that the mother has still a greater control; that her physical and moral nature is, in an especial manner, propagated to her descendants, and that in the language of the proverb, "every man is, what his mother has made him."

Associated inseparably with the facts and observations now presented, is the influential station occupied by females in the domestic circle. They are indeed, the soul, the essence of domestic joys. Without them, society would retrograde to barbarism. It is the warm effusions of feminine feelings which melt and subdue the sterner passions of men, which restrain the ebullitions of youth, and impart even to infancy and childhood, the mildness and gentleness of deportment and of feeling so essential to domestic happiness. Consider again the influence of families over small communities, and the influence which these communities exert in the formation of national character, and you will have presented a still more extended view of the importance of the female sex.

Woman, therefore, is presented for our contemplation, clothed in beauty and arrayed with innocence, possessing intellectual and moral excellencies of a superior but peculiar character; as a daughter and sister exercising the happiest influences on those around her by her excellent, amiable, and dignified deportment; as a wife, giving direction, through a secret involuntary influence, to the character, pursuits, and usefulness of her husband; as a mother, impressing her physical and mental character on her offspring, and imparting, with maternal affection and anxiety, her own ideas and feelings to the children with which she may be blessed; as a matron, presenting her subdued and chaste example, and her benign influences to restrain the vices of the age, and to direct erring man to the true sources of enjoyment. Thus, by a combined in-

fluence, directly and indirectly exercised, females exert a control, always and powerfully operating, over the character of the domestic circle, of society, and of nations. She indeed constitutes, "the last, best gift of Heaven to man."

The question again therefore, returns upon us:—shall the sufferings and diseases of woman, so constituted, so admirably, wonderfully adapted to bless us, in all the relations and duties of life, so important to individual and national happiness, be neglected? Shall we allow her and her helpless offspring, in the hour of her extremity, at a moment in which her mental and corporeal suffering is intense, and her danger imminent, to be committed to the imbecility of ignorance, or to the rashness of empiricism? There can be but one answer to this enquiry. You, young gentlemen, who now appear as the sons and brothers of woman, but who may, under the blessings of Providence, be hereafter husbands and fathers; you, who are candidates for the important and responsible duties of the medical profession, will not, I trust, fail in exerting all your powers, with a persevering industry, to rescue the practice of Obstetrics from the hands of ignorance and empiricism, to mitigate the sufferings of the parturient female, and to render the process of labour more speedy and safe for the mother and her child.

With these objects in view, you must cultivate the *science* of Obstetrics: to attempt to practice it as an *art*, to be acquired simply by observation and experience, you will, you must fail. You must understand the principles of the science before you can successfully attempt its practice. Study then, now, while the opportunity is presented, these fundamental principles, and as an additional inducement, (if one more can be required,) remember that your character will hereafter be inseparably associated with your profession; you rise and fall with it, in the estimation of the community. Form then, high and ennobling views of the dignity, and the usefulness of obstetric

science, cultivate it enthusiastically, and there can be no doubt that the strongest emotions of heart-felt joy will often radiate through your breasts, when, by your instrumentality, the agonizing sufferings of woman have been relieved, or her life preserved.