# Authority and Scepticism in Midwifery and Diseases of Women.

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In olden days we find chapters on midwifery and gynæcology included in the great compilations of Medicine, of which the chief were those of the Greek Hippocrates, dating from about the fourth century before Christ, and of the Roman Galen in the second century of the Christian era. Galen kept a drug-shop in the Via Sacra at Rome, where he was in general medical practice. He rescued the profession of Medicine from the state of chaos into which it had been plunged by the upholders of numerous sects that had sprung up—the Dogmatists, the Empyrics, the Eclectics, the Methodists, and the Pneumatics. His fame was so great and after his time the progress of Medicine so slow that for thirteen hundred years he was quoted by the leaders of the profession as an unassailable authority, to the retardation of research and progress. So late as the year 1559 a Dr. Geynes "was cited before the London College of Physicians for impugning the infallibility of Galen; on his acknowledgment of his error and humble recantations, signed by his own hand, he was received into the College."

By the middle of the seventh century the Roman Empire had fallen and the Arabs under Mohammed had conquered Persia and founded an empire at Bagdad, whence they extended westward. Thus it came about that the seat of culture and learning was transferred from Greece and Rome to the fanatical followers of Mohammed in Arabia, Egypt, and Spain. For the next 600 years following A.D. 630, the year in which the oldest Arabian work on Medicine was published, the Arabs were the most cultured people in the world. The work they did in Medicine consisted almost wholly of translations and copyings from the Greek authors whose works had fallen into their hands. Soon after the end of the twelfth century the power of the Arabs waned; "the day-light of science went down over the nations; and an intellectual darkness, which endured for three hundred years, enveloped the general face of Society."

In the Middle Ages the Renaissance of learning began in Italy

and led to a renewed acquaintance with the writings of Hippocrates and Galen in their original form. In the thirteenth century Roger Bacon, born before his time, studied in the Universities of Oxford and Paris, taught natural science with the help of laboratory and observatory, and began the contest with scholasticism, holding that experiment and observation are of more importance than argument.

At the end of the fifteenth century the discovery of printing began to influence the development of Medicine, and a little later the introduction of woodcuts favoured progress, the latter especially, at a time when dissections of the body were rare. The great voyages of discovery which were made in these times showed the existence of many strange animals and plants unknown to the older peoples, and thus awakened a general interest in Nature study. People began to think more freely and to break away from tradition, the methods of observation and experiment were introduced, and there was a gradual development of the spirit of scepticism which is the fundamental necessity of true science.

In the sixteenth century were published fairly numerous gynæcological writings in which the spirit of progress contended with tradition, with scholasticism, and even with the wildest superstition. Progress began to be made in midwifery and gynæcology with the study of gynæcological anatomy by Vesalius, who was the first to point out that Galen had apparently never seen a human uterus. Colombo, a pupil of Vesalius, rejected the Hippocratic theory of the turning over of the fœtus at the seventh month of gestation, the culbute; and was the first to give a correct description of the attitude and position of the fœtus *in utero*, which he described as forming an ovoid.

In 1513 the first midwives' text-book was printed at Strasburg, "The Rose Garden," by Roesslin. This book is a compilation from old writings from the time of Hippocrates onwards, and treats only of midwifery, but treats it for the first time not as a part of surgery. The book continued to appear in many editions until the eighteenth century, and was translated into Latin, French, English, and Dutch.

Until the middle of the seventeenth century obstetrical and gynæcological cases were in practice attended only by women. Although they wrote about midwifery, men had only a theoretical acquaintance with the subject, and when they were called in consultation did not themselves examine, but had the investigation made by a midwife or family friend of the patient, and thus at second hand gave their opinion and settled the treatment. The first change was made in Paris, at the Hôtel Dieu, in the middle of the seventeenth century, when the midwives who were in charge were prevailed upon to allow surgeons to attend the practice of the

hospitals for the observation of normal labour. Increasing intellectual enlightenment and the recognition that men became more highly skilled in practice as well as science afterwards led to gradual breaking down of the prejudice against male assistance in labour. From Paris the practice of midwifery by men gradually spread to other countries, our own included.

In the seventeenth century great advances were made in Midwifery. William Harvey, the discoverer of the circulation of the blood, opened up new paths by his investigations into the theory of generation and development, the result of his investigations culminating in the principle "omne vivum ex ovo." In accordance with this theory Van Horn considered that the organs hitherto known as testes muliebres contained "ova," and the Dane, Stenson, introduced therefore the name "ovarium." Regner de Graaf observed that the ovaries generated, nourished, and brought to maturity the ova, and that the egg after impregnation is conveyed by the tube into the uterus. In 1677, Ham, of Leyden, demonstrated the spermatozoa. The discovery of the microscope in this century made possible closer investigation into the subject of morbid anatomy, in which a beginning had been made in the preceding century.

In the eighteenth century text-books began frequently to be published in the vulgar tongue. French and English authors used their own language, while Italy continued to employ Latin. Among the English text-books, one by Denman published in 1794 may be specially mentioned. In this work on midwifery were included some chapters on gynæcological diseases, and it contains for the first time the expression "retroflexion of the uterus."

In this century beds and hospitals began to be set apart for Midwifery. In 1745 twenty beds were provided for the purpose at the Middlesex Hospital, and in 1750 and 1752 special hospitals were founded in London—the British, the City of London, and Queen Charlotte's. In 1757 the Dublin Rotunda was founded under the Mastership of Fielding Ould. These hospitals were provided for poor married women and were not much used for clinical instruction. First, in 1765, Leake began to teach at the Westminster Lying-in Hospital, founded specially for the instruction of practitioners in practical midwifery. Hitherto instruction had been given to pupils by practitioners and in private clinics—as, for instance, in those of Osborn and Denman.

Not until nearly another century had elapsed did clinical instruction begin in gynæcology. Kiwisch founded a women's department at Prague in 1842, and August Martin started the gynæcological department in the Berlin Charité in 1858. Then

soon gynæcological clinics spread to all the larger universities of Germany, mostly in association with the already existing midwifery departments. In this country gynæcological clinics for the instruction of students were started in the hospitals of the Medical Schools soon after the middle of the century. In the middle of the nineteenth century also the introduction of anæsthesia and the elucidation of the theory of wound infections inaugurated a new era in Gynæcology, which began rapidly to advance along surgical lines. For a time the complete divorce of gynæcology from midwifery seemed to be threatened, but in the last decade the tendency has been to a reunion of these two branches. In my opinion this is a healthy trend, since they depend upon the same knowledge of anatomy, physiology, development, and surgical principles; and also since they make, when conjoined, a natural and convenient third primary division of the great subject of Medicine.

In my student days instruction in gynæcology, if not deep, was at least broad and various. During one whole summer session I listened to Graily Hewitt's lectures on flexions and versions of the uterus treated in accordance with the mechanical theory for which he claimed the credit. Among his in-patients many notable cures of chlorotic and of over-worked and under-fed young women took place with the help of the knee-elbow position or a cradle pessary and of a nutritious diet with added cream. In the out-patient room at the same hospital Dr. (now Sir) John Williams poured scorn on the theory that a light little body like the uterus could possibly cause symptoms by twisting or turning about in its place. His patients appeared to do well on simple tonics with Bromide for pain or Sulphate of Magnesia for constipation and without much local treatment. Under his teaching a student at least acquired a robust spirit of scepticism. At Dublin Rotunda, Dr. Lombe Atthill on one or two mornings of the week treated each of a string of patients by applications to the cervix of carbolic acid or iodized carbol, and I do not remember seeing him treat a gynæcological case in any other way. A little later—in 1884 to be exact—a distinguished physician made a scathing attack on the gynæcologists as he then saw them.[1] In describing the misfortunes of a neuralgic woman who consulted gynæcologists or specialists for nervous diseases he wrote: "However bitter and repeated may be her visceral neuralgias, she is either told she is hysterical or that it is all uterus. In the first case she is comparatively fortunate, for she is only slighted; in the second case she is entangled in the net of the gynæcologist, who finds her uterus, like her nose, is a little on one side, or again like that organ, is running a little, or it is flabby as her biceps, so that the unhappy viscus is impaled upon a stem, or perched upon a prop, or is painted with carbolic acid

every week in the year except during the long vacation when the gynæcologist is grouse-shooting, or salmon-catching, or leading the fashion in the Upper Engadine. Her mind is thus fastened to a more or less nasty mystery, becomes newly apprehensive and physically introspective, and the morbid chains are rivetted more strongly than ever. Arraign the uterus, and you fix in the woman the arrow of hypochondria, it may be for life."

A few years later I had the advantage for a time of watching Lawson Tait's operative work, and thus of witnessing almost the very beginning of the advance that made possible gynæcology as we now know it. As skill in abdominal and pelvic operations grew and spread abundant opportunities were provided for the study of the morbid anatomy and histology of the female generative organs and of the relationship between pelvic lesions and the rest of the economy. Before that time a fair amount of work had been done on ovarian cysts and tumours; since then exhaustive studies have been made on these tumours, on uterine fibroids, on pelvic inflammations, and extra-uterine gestations. Chorion-epithelioma has been thoroughly investigated, and now the pathology of the interesting group of cases known under the term endometrioma and associated with the origin of tarry cysts of the ovary is in a fair way to be finally settled.

A flood of light has been thrown on our speciality, but still in many directions, and perhaps now more especially in some of the more elementary and fundamental parts of our speciality, those that deal with the commonest and possibly less interesting disabilities of women, there is abundant room for thought and further research. For a long time the pathology of the female generative organs was considered special and peculiar to itself and differing from that of the other organs of the body; naturally this led to many erroneous and imperfect conclusions, and to this day it does not appear that sufficient care has been taken to follow the general principles of pathology and to employ them as far as they are applicable to gynæcology. It is a truism that correct diagnosis must depend on a correct appreciation of the pathological condition from which the patient is suffering. Too often the invention of a Greek name for a symptom appears to have led to the erroneous impression that the Greek name implied a diagnosis. The term Dysmenorrhœa, for example, has an impressive sound, but it connotes nothing more than the patient herself has told us. On us lies the duty to find out the pathological condition from which the symptom takes origin. Often it depends on faulty hygienic or other general conditions. Among local conditions the cause of dysmenorrhœa may be found in organic changes in some part of the genital tract, in inflammations, new growths, or dis-

placements; or it may be found in some developmental abnormality. Under this last heading singularly little importance appears to be ascribed to narrowing, congenital or acquired, of the internal os, with consequent obstruction to the out-flow of menstrual or other discharges. The uterus is a hollow muscular organ with an excretory duct, the cervix, whose canal is narrowest at the two extremities. That there is a functioning sphincter at the internal os is well-known to every one who has dilated the cervix with Hegar's dilators. When the abdomen is opened the upper part of the living cervix can be felt between the fingers and thumb, and usually gives the impression of a special band of muscle surrounding its upper part at about the level of the internal os, and reminding one of an india-rubber ring. By the use of laminaria tents some idea of the degree and extent of any narrowing of the internal os is obtained; in cases of spasmodic dysmenorrhœa these show not uncommonly that there is marked narrowing, usually in the form of a ring, but sometimes extending as a narrow canal or isthmus up to as much as half an inch in length.

Now the examination of a case of dysmenorrhœa takes place at a given time, and the condition found is quite likely to be merely a stage in a process that may be continued over a very long period. In the case of other hollow muscular organs—the heart, the stomach, intestine, bladder, ureter—wherever there is a narrowing of the lumen the muscular wall above the obstruction becomes hypertrophied, and if the condition persists dilatation supervenes in due course. So in the case of the uterus where there is an undue degree of narrowing at the internal os, hypertrophy of the muscular coat will ensue. I have seen many cases of severe spasmodic dysmenorrhœa in which the laminaria tent has given definite evidence of narrowing at the internal os; in young girls it is not possible to determine whether the body of the uterus is hypertrophied in such cases, but in some nulliparæ seen later in the twenties I have observed that the body of the uterus is definitely hypertrophied; it feels spherical and enlarged on bimanual examination and the sound passes $3\frac{1}{2}$ inches or thereabouts. At a still later age nearing the climacteric a small number of nulliparous patients suffer from severe menorrhagia, have large and somewhat tender uteri, are diagnosed as cases of chronic metritis, and have sometimes to be subjected to radical operation; in such cases Fletcher Shaw has shown that the appearances are those of hypertrophy of both muscular and fibrous constituents of the uterine wall. Finally, when the patient has passed the menopause such a uterus may intelligibly become a pyometra because of the narrowing of the outlet and the senile wasting and weakening of the muscular wall. I have not recognized a case of pyometra

belonging to this series, although such cases probably occur. The usual cases of pyometra arise after the menopause, most commonly in obstruction by cancer of the cervix or body of the uterus, less commonly in acquired stenosis of the internal os; always in thin-walled and atonic uteri.

Regard for the authority of the eminent sceptics who ruled obstetrics in the seventies and eighties of last century explains, in my opinion, why it is that the application of well-known principles of general pathology to the uterus as here outlined has not yet received general recognition by gynæcologists. Tardiness such as this may be balanced by an undue readiness to accord exaggerated or at least premature importance to a new and imperfectly worked out theory.

The beginning of the application of the theory of the internal secretions to Medicine held a lesson of this kind that was certainly not learned by us as a profession if we may judge from recent widespread dabbling in this region of therapy. When the action of the thyroid had been investigated and largely put on a firm basis, it was discovered that the ovaries also acted by means of an internal secretion. Two eminent practitioners, each with six cases of hysterectomy for fibroids, all done within twelve months, hastened to publish a claim that the preservation of an ovary had remarkable effects on the welfare of the patients. The great majority of gynæcologists, without further ado, followed their example and plumed themselves on the fact that they also always saved an ovary or at least part of one when they could. In consequence of this hasty and impulsive action it was many years before the real scientific facts of the case began to be apparent. It is now fairly well established that the artificial menopause is worst when the ovaries alone are removed, better when the uterus and its appendages are completely removed, best for the time being in cases in which the ovaries or part of them are preserved. In the last group of cases, however, menopause symptoms come on, often severely, at an interval of two or three years after the operation. Speaking broadly, the general condition of the patients who have had the total operation is much better than that of the others at the end of two years. An extensive and laborious investigation on my cases by Dr. Beatrice Webb showed that the sexual life of the patient was impaired little or not at all by the complete operation. A further result of these investigations rather surprised us at the time, but proved to be in accordance with later developments of the theory of internal secretions. The younger the patient the less was she found to suffer from menopause symptoms, the balance of the remaining internal secretory organs being more easily regained. The patients who complain most of the menopause

symptoms are those between the ages of 40 and 50 at or near the natural menopause.

In our own generation the progress of Medicine in all its branches has been greater, more rapid, and in more various directions than ever before possible, and it has been correspondingly harder to preserve a steady mind and measured judgment. In the panorama of Medicine spread before us in the medical journals and periodicals it is often difficult to see the wood for the trees. The proper teaching and practice of midwifery and gynæcology calls for a wide knowledge of the general principles of medicine, surgery, and pathology, and the application of this knowledge to the cases met with in the speciality. In this is to be found a strong argument against what I may be permitted to call premature and mere specialism. The impossibility of teaching all who aspire to become sound practitioners more than the broad general principles on which our knowledge is founded increases the difficulty of spreading true and up-to-date knowledge in a special branch.

The tendency of modern methods of examination and their influence on education is to squeeze all but the very few into one common mould; to destroy the power of rational thought, and thus to hinder the spread of true knowledge. The importance of authority is apt to be exaggerated, and the introduction into general use of new truths and methods unduly retarded. The student who is taught to think and reason, to apply general principles as far as they will go, is likely to make a far better practitioner and citizen than one whose memory is crammed for the time full of miscellaneous and disconnected facts, ill-digested and half-understood, and only reproducible in parrot-fashion.

Examiners are usually chosen from among older men, and consequently often have formed opinions fixed and unalterable. An examiner should constantly be on his guard so as not unduly to press his personal peculiarities and predilections. No doubt examinations are the best means hitherto devised to protect the public and ourselves against charlatanism and quackery, but they have a serious tendency to contract the area of vision of both examiner and examinee. The student and his teacher naturally study the idiosyncrasies, if any, of the examiners and prepare to meet them. Similarly text-books written primarily for students have to be written with one eye always on examinations, and so we find a certain uniformity, a want of elasticity that leads to failure to reflect fairly progress that has been made. There is a dangerous readiness to believe all we read, and all we are told by certain teachers; this tendency unduly to look up to authority is inculcated at school and consolidated by our training, and especially by

the usual methods of examination. It is necessary continually to strive against the narrowing influences of text-books and examinations, to keep alive the spirit of scepticism, and to call upon authority for proofs.

The constant recurrence in text-books and writings of the term "a pair of volsellum forceps," led me to consult a Latin dictionary, where I found that the word "vulsella" or "volsella," a noun of the first declension, means a forceps, a kind of pincers. It would appear that sometime or other a teacher with the Latin of a fourth form schoolboy must have mistaken the word for the plural of a neuter noun ending in "um," and some pleonastic successor in search of a higher-sounding title for his instrument tacked on the other three words, thus triumphantly employing four words in place of one that is correct and sufficient; and the term so full of sound and pregnant with meaning has since been sedulously copied by author after author.

In describing the action of the uterus in labour the term inertia is applied by most teachers and text-books to two totally different and contrasted conditions. Primary inertia is used to designate the action of a uterus in labour slow from the first and ineffective, the work of a lazy or, better perhaps, sluggish uterus. The term secondary inertia is an insult to a uterus which has tried hard to overcome its difficulties and after prolonged efforts has become tired and exhausted. Surely the term uterine inertia should be banished and replaced by words more accurately descriptive of these two opposite conditions.

In the discussion of obstructed labour the term tonic contraction is used merely to conceal our ignorance. As a natural result in obstructed labour the two portions of the uterus, the upper contracting part and the lower dilating zone and cervix, become abnormally contrasted with each other, and the condition that should always be described as *excessive uterine retraction* develops and, if not well treated, leads to rupture. Intermittent pains can be distinguished by abdominal palpation and may continue right up to the moment of rupture. To this condition the term tonic contraction is usually but wrongly applied. The term tonic contraction means, if it means anything, that the uterus has entered into one long continuous contraction, showing no intermissions. This state is also met with in obstructed labour, and may come on at any time after the membranes have ruptured, even early in the first stage; usually it is caused by ergot or by rough and repeated examinations or ineffectual attempts at delivery. Labour comes to a standstill and the condition leads to death from exhaustion or sepsis. The uterus does not rupture spontaneously, though it may easily be ruptured by the accoucheur in his attempts at

delivery. The term tonic contraction should be reserved for this condition, and should not be applied indiscriminately and loosely to well-differentiated processes.

The large and confused group of cases jumbled together under the term prolapse of the uterus forms one of the least satisfactory groups of diseases of women from the standpoint of the student and practitioner, and is not adequately treated in the text-books. The term itself reminds one of the definition by the French savants of a lobster, as a red fish that walks backwards—a definition that Cuvier is said to have assured them was correct, except that a lobster is not a fish, is not red, and does not walk backwards. Similarly, in the cases called prolapse of the uterus, the parts do not merely "fall down," but are expressed; and the uterus is by no means the only or even the chief constituent of the lesion. In a wide circle the term affords as much satisfaction, or more, than the blessed word Mesopotamia. It is common for women who become conscious of some unusual pelvic sensation to go to the doctor with a ready-made diagnosis that the "womb is down." This lends itself to easy translation into prolapse of the uterus and to as obvious treatment by the insertion into the vagina of a soft rubber ring or other abomination. As the result of such a series of events one has found the ring pessary applied in cases of extra-uterine gestation, salpingitis, cancer of the cervix, gonorrhœal cervicitis, vaginitis, and indeed in practically every affection of the pelvic organs in women.

The conditions jumbled together under the term uterine prolapse are cases of hernia, comparable in their origin and effects with hernia at other weak parts of the abdominal wall. When considered as a hernia with neck, coverings, sac, and contents, the changes in the extruded parts become easily understood; the thickening of cervix and vaginal wall near the apex, the general enlargement and elongation of the whole uterus in old standing cases, for two generations erroneously considered to be due to stretching of the supra-vaginal cervix; and the characteristic ulcer that forms in neglected cases.

Among the contents of every prolapse to which the bladder contributes it is strangely overlooked that the cystocele includes the trigonum and the lower end of the ureters, and that the latter are obstructed by stretching and by the pressure of the neck of the utero-vaginal hernia.[2] Forty years ago Ch. Féré published an account of six autopsies on cases of prolapse in women from 63 to 91 years of age. In all six there was a cystocele with dilatation of the pelves and calyces of the kidneys. In five of the six cases there was also inflammation affecting the bladder, ureters, pelves, and calyces of the kidneys, and the kidneys were themselves the

seat of multiple miliary abscesses. In one case only was there no inflammation, and in it the kidneys were dilated and had a thinned and pale cortex—a condition of hydronephrosis. Féré adds that he has several times seen uræmic disturbances which disappeared after the reduction of a prolapse. It follows that prolapse frequently gives rise to alterations of the urinary tract and that these may eventually be fatal.

It is to be borne in mind that each case of prolapse as seen is merely a stage of a process that continues for years or for the whole of life, and that the earlier treatment is begun the easier and more effective is it likely to be. Most cases would be entirely prevented by efficient immediate suturing of the torn perineal body at the conclusion of labour. In those commencing in the puerperium appropriate treatment should be instituted at once. In established cases well-planned plastic operations are required. In my opinion pessaries should be entirely banned, in spite of the sanction of the opinion and practice of more than 2000 years. Pessaries merely keep the prolapsed part out of sight for a time, while as a rule by setting up stinking discharges and inflammations, with consequent injury to the supporting tissues of the uterus, they help to hasten the prolapse on its downward course. Only in exceptional cases in very old or decrepit women should pessaries be allowed a place. They have long outlived their usefulness, and it would be a great gain to all the subjects of prolapse if in all other cases than those just mentioned pessaries were thrown on the rubbish heap, to which they properly belong.

The progress of Medicine and of its three main divisions—Medicine, Surgery, and Midwifery and Gynæcology—is bound up with the general progress of learning. When intellectual activity is great Medicine advances along with all the other arts and sciences and takes toll from them all. When the lamp of learning burns low Medicine sinks to a dark plane. In the last two generations human knowledge has advanced by leaps and bounds and scientific Medicine has made enormous strides. But the science is not exact, and we are far indeed from reducing its phenomena to strict mathematical demonstration. In the meantime the struggle goes merrily on between authority and the scepticism that forms the true foundation of the Science and Art of Medicine.

1. Clifford Allbutt. Gulstonian Lectures on Neuroses of the Viscera. *Lancet*, vol. 1, 1884, p. 459.
2. Ch. Féré. Le Progrès Médical, vol, xii, 1884, p. 22.