A Short Review

OF

OBSTETRICS AND GYNÆCOLOGY,

1887-1912.¹

By EDWARD MALINS, M.Sc. BIRM., M.D. EDIN.,
F.R.C.P. LOND.,

EMERITUS PROFESSOR OF MIDWIFERY AND DISEASES OF WOMEN IN THE
UNIVERSITY OF BIRMINGHAM; HONORARY CONSULTING OBSTETRIC
OFFICER TO THE GENERAL HOSPITAL, BIRMINGHAM, ETC.

LADIES AND GENTLEMEN,—At this our first meeting let me begin by congratulating those who have joined our society, the purpose of which is the pursuit of knowledge in studying the science and art of obstetrics and gynæcology. We meet in response to a wide-felt impression that there exists in the provinces a large field of opportunity for making use of the object we have in view. Your presence here to-day is an indication of earnestness in the undertaking and, I venture to think, an auspicious omen of success. We are starting upon a broad democratic basis, free from constraints and apart from the trammels of custom and tradition; we are widely searching for truth in the light of the greatest good to the greatest number. We shall have among us, I doubt not, those who are prepared to offer original research, interchange of opinions, and experience from varied standpoints of observation and practice. The in-gathering from this material cannot fail to increase our knowledge and to give an impulse to our enthusiasm. Thus fortified we are enabled to justify our united existence with confidence, and firmly to look forward with courage to the future.

THE PROGRESS OF KNOWLEDGE GRADUAL.

At this inaugural meeting it is not easy for me to find a fitting theme upon which I may engage your special attention for a short time. I am conscious that I am addressing those whose wisdom and knowledge in this department of our art is already well established and proficient. But, may I add, our later years are sometimes accompanied by privileges which may allow us to take advantage of circumstances like the present. One of these is the satisfaction of being able to review the past and to make a comparison with the present. In doing so, if there is one characteristic that stands out with more insistence than others it is the indisputable fact that there is no finality in knowledge. Yet it becomes evident even in such a certainty that the growth of our efforts towards the highest attainment is gradual, that knowledge comes as it were piecemeal, by accretion on the work of those who have gone before and who have laboured in similar tracks. The search for truth is ever a quest of endeavour and patient persistence; it embraces onward movement; progress must be ever active. If we rest we rust, drop out of the struggle and cease to be; passive resisters find no place in this pursuit. In our profession the capacity for taking trouble generally meets with a due reward; it affords a solid ground for advance. Directed, as it has been at times, by the lofty gift of genius which creates and controls, strength is added. Thus by a profounder insight the greater problems it has grasped are solved and results are given ungrudgingly to the common good of all. Results, however, are not always immediate, but they eventually become unfolded. As they open to us their power of application they impress us with the conviction of their value, the significance of which at the time they arose we saw not when we moved therein; so it is:—

For while the tired waves, vainly breaking,
Seem here no painful inch to gain,
Far back, through creeks and inlets making,
Comes silent, flooding in, the main.²

[Professor Malins here dealt briefly with the rules which had been drawn up for the guidance of the members of the new society, and dropped some pertinent hints with regard

to the reading of papers and the general conduct of the meetings. He proceeded:]

A period of twenty-five years, a quarter of a century, engaged in the special department of a large hospital may be granted as an asset of extreme value in a lifetime. For this I am indebted to the General Hospital in this city, under the auspices of which I am deeply sensible of many advantages. The old worn-out and weather-beaten building, the present noble structure—a combination both of utility and ornament—have each imbued me with their traditions and associations, memories which cannot be readily forgotten, and indeed which it would be ungenerous to allow to fade.

If I were asked to name some of the most marked instances of progress in our calling during the interval I have mentioned, I should find no difficulty in recalling a number. I may without hesitation, however, single out several of them as examples of the text to which I have alluded—namely, the gradual evolution of discoveries and the discernment of those who have so aptly made use of them to the practical benefit of humanity at large. Pathological, chemical, and bacteriological studies have brought about a clearer understanding of the nature of infective processes and the root evils from which they spring. The crude hypotheses of former times have melted away as we have become conversant with more accurate methods of research and observation.

ADVANCE MADE IN REGARD TO PUERPERAL INFECTIONS.

Perhaps in no direction has this modern advance been more strongly marked than in the explanation of puerperal infections. The gain is great, yet we cannot ignore the past in tracing the steps by which it has been attained. Undoubtedly the era of regeneration is signalled by the work of Semmelweis. Semmelweis, with unfaltering faith and dauntless courage, pursued the conviction which had obtained possession of his mind—that the origin of puerperal fever, so-called, lay in the presence of cadaveric poison, the decomposition of animal organic material. Upon the foundation of his demonstrations and beliefs has arisen the superstructure of our present knowledge in this direction, with which the names of Pasteur and Lister will ever be associated. To Pasteur's discoveries, and to the researches, sagacity, and insight of Lister we are indebted for the application of the doctrines enunciated with so much fervour by Semmelweis. During the lifetime of Semmelweis the facts and opinions that he strove to inculcate were received with mistrust, contumely, and scorn. Borne down by the strain of his efforts and the opposition he encountered his mind eventually gave way. His ideals had not been realised, his work had been disparaged; he died at the age of 47, unhonoured and unsung. Forty-six years later, a just, though tardy, tribute to his name and worth took the form of a noble statue placed in his native town of Budapest.³ I make this brief allusion to history to emphasise the credit due to the past in building up our present knowledge. Much might be said of others, in the array of whom the names of Gordon, Charles White, Oliver Wendell Holmes, Simpson, and Stadfelt stand out in strong relief as gifted pioneers in the march of progress. These suffice to show the trend of thought upon the question and the earnestness with which it has been kept in view.

The practical point is how far more recent discoveries have enabled us to combat the scourge of puerperal sepsis, and to abate the number of deaths in childbirth due to this cause. The returns of the Registrar-General give us information that the endeavour has not been in vain. To quote from the last available report (1910): "Puerperal fever: The deaths referred to one or other of the definite heading comprised under this term (i.e., puerperal septicaemia and septic intoxication, puerperal pyæmia, and phlegmasia alba dolens) numbered 1113. In addition to these, 161 deaths were indefinitely certified as due to 'puerperal fever' (variety unspecified). The total number of deaths certified as due to puerperal fever (161) is 29 below that in 1909, and compares with 478 so recently as 1901." The figures given show distinct improvement in the death-rate from puerperal sepsis. Our disappointment would be great were it otherwise in face of the unremitting attention bestowed upon

¹ Presidential address delivered at the inaugural meeting of the Midland Obstetrical and Gynæcological Society on Oct. 24th, 1912.

² A. H. Clough.

³ The story of his life is told by the late Sir William Sinclair, with his characteristic force and expression; a volume which should be read by every student of medicine.

preventive measures. For a large share of this we are indebted to the Midwives Act and the formation of the Central Midwives Board. The influence of this body in the training and supervision of midwives may be regarded as one of the greatest social reforms of our age. Time will mature the value of the work so far accomplished. Gradually the uneducated and the untrained will lapse from the roll of members, their places being filled by others of superior intelligence and competence; with this will loom the light of a brighter hope in the future contest against these formidable evils.

The conviction that puerperal infection is a preventable complication has steadily become incorporated in the practice of midwifery. From nothing, nothing can come. If this truth be accepted, whence, may we ask, come the disasters and tragedies that make us halt and reflect? Surely they must arise from the infringement of elementary rules of knowledge, the breaking of well-known laws of cause and effect. I have always taught as a maxim that the safest guide in practice at the beginning is "to learn what is true in order to do what is right." This is comprised in a few short rules which may readily be remembered. That vaginal examinations are very seldom necessary; the size and shape of the pelvis and the position and movements of the child in the great majority of cases can be determined by external examination; all tears should be repaired at once, all douches avoided, and, lastly, the constant use of rubber gloves, kept for this purpose only. Blundell⁴ was not far from speaking the truth when he said that "he is the best accoucheur who keeps his hands in his pockets." It is a common error we often hear when a student tells us that he has delivered so many women. If it could be realised that women deliver themselves with the assistance of nature, oftentimes with less risk than with that of art, would it not be wiser simply to attend his cases rather than to subject them to the chance of unnecessary danger?

It is notoriously admitted that the mortality of childbirth in private practice is difficult to obtain with accuracy. Notification, now insisted upon, will give material assistance in framing an estimate. Possibly it may remove the opprobrium still clinging to some critics that the morbidity and the mortality of private practice is greater than that of either midwives or of special hospitals. May I digress for a moment and speak of what has been with me a long-nurtured desire that we should see maternity homes established for women to enter for the purpose of confinement only? Such homes may be under municipal control or they may be of private enterprise, registered, applicable to all classes of society on graded payments, according to social position and accommodation required. The practitioners in charge should be experts in midwifery, the equipment should be of the most modern kind, adapted solely for the object in view, and the nurses should be trained in the special subject of their duties. I feel convinced that many advantages may be gained in safety both to mother and child, a sounder restoration to health, a greater absence of risks, and, though not least, less disturbance of household arrangements that are so frequently contributory to mental perturbation and physical discomfort. Prejudices may be overcome by reason; the prospect of confinement *tuto et jucunde* would tend to allay apprehensions and to lead to calmness and confidence in the result.

CÆSAREAN SECTION.

Another and remarkable example of the advance made in the methods of treatment is shown in the operation of Cæsarean section. We must all be familiar with the dread formerly associated with the performance of this operation. In 1870 Dr. Barnes,⁵ in his classic work on obstetric operations, wrote of this: "It is resorted to with a feeling akin to despair for the fate of the mother, which is scarcely tempered with the hope of saving the child. It is looked upon by the great body of obstetricians as the last desperate resource, as the most forcible example of that kind of surgery which John Hunter regarded as the reproach of surgeons, being a confession that their art is baffled." The statistics of Dr. Radford, published ten years later (for Great Britain and Ireland), give 77 cases, of which 66 died, or 85.71 per cent. In 1888 Dr. Harris tabulated 153 cases from American literature, with 37 per cent. recoveries.

Dr. A. L. Galabin⁶ gives the mortality of 84 per cent. for British statistics in former years. The most recent figures given by Dr. Amand Routh,⁷ in a valuable monograph from which I take the author's words, show a great contrast to those of earlier years. The cases collected, numbering 1282, represent the complete consecutive list of all the cases of Cæsarean section operated upon for all sorts of conditions in Great Britain and Ireland by obstetricians and gynæcologists living on June 1st, 1910. Of the 1282 Cæsarean sections performed up to June 30th, 1910, 1254 have been operated upon for all conditions since 1890 with a mortality of 145, or 11 per cent. During the last uncompleted five years (Jan. 1st, 1906, to June 30th, 1910) 711 cases of Cæsarean section have been performed with 58 deaths, or 8.1 per cent.; and this may roughly be considered to be the present death-rate for all indications in the United Kingdom. The death-rate for cases of contracted pelvis during the last five years will be seen to be 6.1 per cent.; the death-rate in favourable cases (469 in all) is only 2.9 per cent., favourable cases meaning when the patient was "not in labour" or where labour had just commenced. But mark these very important figures. In "labour, membranes ruptured," the mortality was 10.8 per cent., and in "frequent examinations or attempts at delivery," it was 34.3 per cent. Some of us in consulting practice may recall the feeling of hopelessness with which we have witnessed the results of long-continued labour with combined exhaustion and infection dominant. In these extreme cases I have at times been impressed with the feeling that my presence has been sought, not from any possible power to save the patient, but merely to lend dignity to dissolution, to afford a solace to the survivors who mourn, and to condone a sacrifice to the dangers of delay. Prior to the time of the recent success mentioned it can be well understood that women to whom stern necessity offered the chance of life by Cæsarean section literally sat in darkness and in the shadow of death. This grim foreboding has now ceased to exist; confidence has taken the place of doubt and uncertainty.

To Porro in 1876 we owe the advent of a fresh impulse given to safety in removal of the uterus. Even more deeply are we indebted to Sanger in 1882 for the incalculable value of his teaching in the conservative operation of Cæsarean section. Sanger achieved what had hitherto been incomplete; where art had to be substituted for natural delivery he engaged art to complete the process with safety by securing the closure of the uterine wound. Thus he laid the spectre which for ages hovered over the bed of those upon whom Cæsarean section was to be performed. With this perilous difficulty removed, the operation has, under favourable circumstances, been reduced from the domain of terror into the region of one of the most promising in obstetric practice. Failure in cases of contracted pelvis is rarely met with if the principles and methods of Sanger are followed. "Peace hath her victories no less renowned than war";⁸ it would be hard to find a triumph more worthy than this to be included in the roll of fame.

CANCER.

There are many other subjects with which we have to deal almost daily waiting for further elucidation; of these none is more prominent than the world-wide efforts that are being made to interpret the origin of cancer, and, by deduction, the best methods of treatment. We are told in the reports of the Registrar-General that during the past 14 years (1897-1911) the death-rate from this cause among women is increasingly great; that while cancer of the uterus has shown little or no increase during this period, the mortality from mammary cancer has increased by 29 per cent., notwithstanding lives saved by improved methods of treatment. The greatest absolute increase, however, among women has been from cancer of the intestines, the mortality attributed to which has been practically doubled during the past 14 years. As a close ally to uterine cancer that of chorion epithelioma has resulted in interesting explanations as to affinity with its malignant relation. The propriety of early recognition and treatment has been especially enforced. Much discussion has ranged round the operative treatment of cancer of the uterus. We

⁴ Principles and Practice of Midwifery, 18 0, p. 465.

⁵ Obstetric Operations, 1870, p. 320.

⁶ Manual of Midwifery, sixth edition, p. 735.

⁷ Webster: Text-book of Obstetrics, p. 711.

⁸ Journal of Obstetrics and Gynæcology, vol. xix., 1911.

⁹ Milton: Address to Lord General Cromwell.

cannot deny to Wertheim the credit due to his admirable work, and to the ability and exactness with which his teaching is stamped. A greater number of recorded cases are yet required to estimate clearly the effect upon the continuance of life after his radical method of extirpation.

PROGRESS AND INQUIRY IN OTHER DIRECTIONS.

With regard to gynæcology there is much to be noted in the progressive nature and value of the work accomplished. It must be confessed, however, that the tendency to operative treatment in the diseases of women has not diminished. There is still much to be learned in the way of treatment, both in the diseases and in the disorders to which women are liable. Naturally among those actively engaged in daily routine, when illness comes death is dreaded and incapacity is feared. It is sometimes difficult to determine when it may be advisable to take a nearer or a more distant path to gain the object desired. Necessity and expediency have different values in settling the wisest course to follow. The sufferer is often left to make her own choice, without sufficient or, indeed, any knowledge to guide her destiny. Our own experience tells us that the longer though less attractive road is frequently attended with sound recovery and with less risk. Observation of the course of illness in pelvic inflammatory conditions, particularly those of specific infection, justifies me in making this comment.

A large opportunity has been offered for the radical treatment of fibroid tumours of the uterus. It has been clearly demonstrated that these growths are liable to changes of a degenerative kind which affect their growth, structure, and function. Consequently there is a greater risk in adopting a passive attitude towards them than formerly believed. The remarkably successful results of early operative treatment have been attended with a record that bids to emulate the history of ovariectomy.

Surgical modes of restoring displacements of the uterus have evoked a number of ingenious and skilful plans of treatment based upon sound principles, the effects of which contrast strongly with the mechanical methods of former years.

We are upon the threshold of many innovations which promise full opportunities for future inquiry and proof. The influence of the thyroid and parathyroid glands on pregnancy, the menopause, and associated conditions; the significance of lutein cells; the consideration of various sera and vaccines offer extended possibilities in many directions. Another aspect of knowledge in the future is also full of interest—the bearing of ante-natal conditions in development and disease. The importance of certain social questions will be affected by knowledge thus obtained. After all, is there anything new under the sun? We often find that the ideas we have been wont to regard as original have been forestalled by others; incidentally may I illustrate this from a quaint writer of the seventeenth century, Sir Thomas Browne?—"They that enter the world with original diseases have not only common mortality but sick traductions to destroy them, make commonly short courses, and live not at length but in figures, so that a sound Cæsarean nativity may outlast a natural birth, and a knife may sometimes make way for a more lasting fruit than a midwife."¹⁰

SOME PROMINENT WORKERS IN THE PAST.

In all times the onward movement of civilisation has been accompanied by emigration from the less populated to the larger centres, where greater facilities are presumed to exist for the acquisition and diffusion of knowledge. And yet in these aggregations, from the vastness of metropolitan cities there is oftentimes found a lack of cohesion, a listlessness of fraternal frankness and sympathy that weaken the union of kindred spirits and make individual isolation more defined. It is an atmosphere that frequently cools the ardour of the newcomer and renders the ambitious wary of his title to fame. It is evident that in this influx to the capital the provinces contribute largely, the fittest survive and become merged into the central stream of progress, where they are adopted as citizens of a huge concentration. In our profession instances of this kind are numerous, but there are

yet many provincial names which have left a lasting impression upon the history and progress of our calling; and numbers still at the present time who remain to uphold with distinction the true spirit of the past.

Among the Midland towns it will be granted that Birmingham has held a foremost place. J. T. Ingleby was the first lecturer at the Royal School of Medicine here. In 1842 he published a work, "Facts and Cases in Obstetric Medicine," and later, "A Practical Treatise on Uterine Hæmorrhage." These were regarded as authoritative works exhibiting much diligence and power of observation. More recently the researches of the late John W. Taylor added to the knowledge of ectopic gestation and other subjects. His writings are marked by zealous and carefully noted clinical work. It must, however, be admitted that the most powerful impetus to the subject of gynæcology in our time was given by Lawson Tait, whose reputation spread far beyond the bounds of the locality in which he lived and practised. Tait died in 1899. He was a remarkable man, with many varied attributes of character, dominated by strong will power. A man of conspicuous ability, bold in action, fearless in expression; a clever surgeon, quick in apprehension and fertile in resource; one whose versatility and energy stimulated enthusiasm and provoked emulation. His influence marked a new era in the progress of gynæcology, and made him famous during his career in our midst.

PRESENT FACILITIES IN BIRMINGHAM.

In this great centre, priding ourselves as the second town in the kingdom, we are not without adequate means of carrying on in the best manner the special purposes of our profession. We have an admirable and well-administered hospital for women; a special department for women at the General Hospital, and a similar one at the Queen's Hospital; and a maternity hospital equipped with all modern requirements, to which is attached an outside lying-in department. In the last-named institution much valuable work is done in the teaching and training both of students and midwives. The opportunities for upholding the intention of the Midwives Act are well maintained under the supervision of the medical officer of health. There are now, owing to the extension of the city, 252 midwives upon the roll; as a proof of efficiency among them I may quote from Dr. John Robertson's report: "In the old Birmingham area there were, on the 31st December, 1911, 192 midwives in actual practice. These midwives attended 9290 births as compared with 9439 in 1910, 9238 in 1909, and 9244 in 1908. The total number of births registered in the old city area was 14,704, so that the midwives attended 63 per cent. of the births in the old city area." Another very important arrangement has been made for the admission of cases of puerperal fever to the Hospital for Women on the recommendation of the health department. The hospital authorities have agreed to set aside a ward for septic cases containing two beds: thus the highest medical and nursing skill available will be obtained under the most favourable conditions.

I have endeavoured to sketch some features of our onward movement. I am conscious how imperfectly I have expressed what has been uppermost in my thoughts, but if any suggestion that I have made may lead to reflection, or kindle increased interest in our undertaking, my shortcomings will be amply repaid. Let us therefore look to the past for experience, to the present for action, and to the future for success.

FOREIGN UNIVERSITY INTELLIGENCE.—

Vienna: Dr. S. v. Schumacher has been promoted to an Extraordinary Professorship of Anatomy. Dr. Richard Bauer has been recognised as *privat-docent* of Medicine.—*Würzburg*: Dr. Joh. Ernst Schmidt has been recognised as *privat-docent* of Surgery.

THE ROYAL SANITARY INSTITUTE.—The Henry Saxon Snell prize of 50 guineas for an essay on "The Ventilating, Lighting, Heating, and Water-supply Appliances and Fittings for an Operating Room for a General Hospital" has been awarded one half to Mr. John Darch, M.R.San.I. (Wandsworth), and the other half to Mr. H. F. V. Newsome (Manchester) and Mr. John G. Cherry, M.R.San.I. (Manchester). A bronze medal of the institute will be awarded to each of the successful competitors.

¹⁰ Religio Medici, Ed. Dr. Lloyd Roberts, p. 215.

A NOTE UPON THE COMPLETE REMOVAL OF PLEURAL EFFUSIONS

BY THE REGULATION OF INTRATHORACIC
PRESSURE DURING ASPIRATION
(OXYGEN REPLACEMENT).¹

BY H. MORRISTON DAVIES, M.C. CANTAB., F.R.C.S. ENG.,
ASSISTANT SURGEON, UNIVERSITY COLLEGE HOSPITAL.

ALTHOUGH paracentesis of the chest is such a common procedure it does not seem to be at all fully realised that the ordinary method of withdrawing the fluid by aspiration is most unsatisfactory. Aspiration in itself is not devoid of danger, and it is frequently the cause of considerable

FIG. 1.

Right-sided pleural effusion in a man aged 75. There is displacement of the heart and the mediastinum to the left.

discomfort to the patient. It may be said, moreover, that as a general rule never more than 50 per cent. of the fluid present can be withdrawn at a single tapping; and when, therefore, aspiration is used for the purpose of getting rid of an effusion, so as to allow of an examination of the lung by radioscopy and radiography, it is practically useless.² Symptoms of distress—e.g., cough and pain—often appear when only 1 or 1½ litres of fluid have been withdrawn, yet the desire to take out as much fluid as possible does not infrequently tempt the operator to continue the aspiration after these symptoms have first appeared, thereby increasing the risks of œdema or of cardiac embarrassment. When one side of the chest is full of fluid the removal of 1500 c.c. is regarded as most satisfactory, but skiagrams will show that there is still an astonishing amount of fluid left behind.

Figs. 1 and 2 were taken before and after the withdrawal of 1000 c.c. In this case malignant disease of the lung was suspected, and the effusion was tapped in the hope that the lung would be sufficiently uncovered to permit of a diagnosis being arrived at by the physical signs and skiagraphy. An examination of these skiagrams shows, however, that the level of the fluid has been lowered barely one interspace by the tapping, and that the root of the lung and the lower lobes are still wholly obscured.

The reason of the apparent discrepancy between the alteration in the level of the fluid in the second skiagram and the withdrawal of over one litre of fluid is quite easy of explanation. Before the tapping is done the pressure in the affected pleural cavity is either only slightly negative or even positive, the mediastinum and its contents are displaced to the opposite side, and the lung is collapsed. The effects of

FIG. 2.

Skiagram of the same patient after 1000 c.c. of fluid had been drawn off. The level of the fluid has been lowered about one interspace only. The heart and mediastinum show much less displacement.

FIG. 3.

Skiagram of the same patient after the further removal of 1500 c.c. by the oxygen replacement method. The diaphragm is now visible, and the only fluid in the chest is a small collection between the chest wall and the lateral aspect of the diaphragm. Above this there is a small pneumothorax. The whole of the lung is exposed, and a shadow can be seen extending down from the hilum into the lower lobe.

the removal of the fluid are to increase the negative pressure, to permit of the mediastinum and its contents to return to their normal position, and finally to allow the lung to expand; it is only when this last change is taking place that the level of the fluid begins to sink.

As the chest is a closed chamber it is obvious that if fluid is withdrawn, either a rapidly increasing negative pressure must be produced or the fluid must be replaced by some other substance. In paracentesis both mechanisms are brought into play, but there is a limit to the rapid alteration in the position of the mediastinum and to the expansion of the lungs when these are the seat of fibrotic changes or are surrounded by a thickened or adherent pleura, and when the traction exerted on these by the increasing negative pressure exceeds a certain grade the symptoms of distress so constantly seen during paracentesis are produced.

The clear recognition of these facts suggests that if it were possible, during the process of withdrawing fluid, to modify the intrathoracic changes produced by the

¹ The expenses of this investigation have been in part defrayed by a grant from the Graham Research Fund.

² There is no doubt that some of the discredit which has been so unjustly thrown on the value of skiagraphy in lung disease is due to this fact (compare Figs. 1 and 2).