Alexander Joseph Dempsey (1886–1963)

President of the Ulster Medical Society 1949–50

Presidential Opening Address
Ulster Medical Society

A BRIEF SURVEY OF EARLY MIDWIFERY PRACTICE

IN choosing a subject for my address to-night, I was anxious to speak about something that might be of general interest to everyone present, and try to avoid anything of a technical nature, as I am sure you will have several opportunities of listening to scientific papers on medical subjects at our meetings here during the next year, given by men much better qualified for that purpose than I am. Therefore, with the desire to keep as much as possible to my own subject, I am going to endeavour to interest you for a very short time on the early beginnings of midwifery practice.

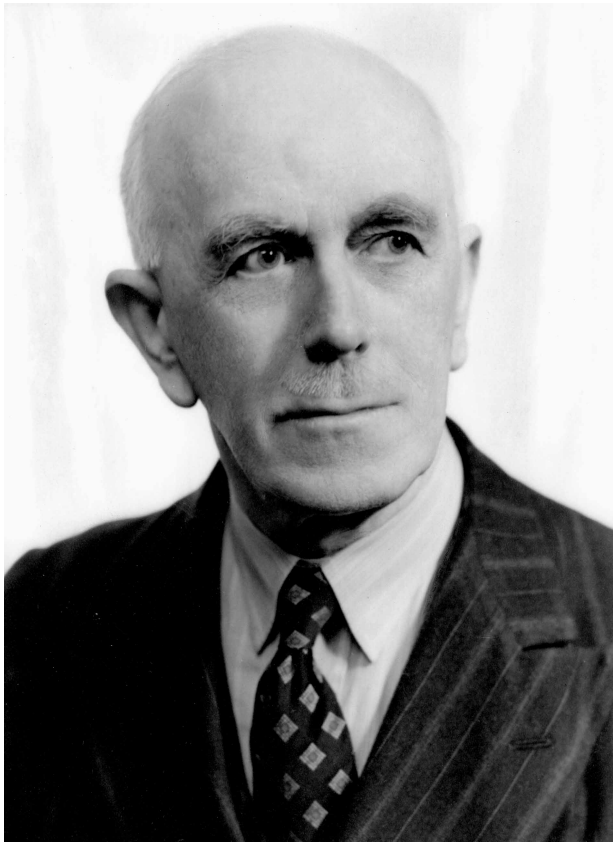
How did the modern midwifery of civilized nations develop from the original beginnings? Now that is a question, even with our most stringent research, to which we have not been able to furnish a complete answer. However, the investigations into the manners and customs, as well as the manipulations and assistance at birth, are of outstanding interest in the history of civilization.

The ancient records at our disposal are so meagre, that they contain very little that is of value to us in arriving at the stage midwifery practice had reached in the early centuries B.C.

The oldest records of woman's diseases in our possession at present, mostly gynaecological, saved from the disastrous fire which burnt down the great library at Alexandria centuries ago, are contained in some of the ancient Egyptian papyri, now in the library at Leipzig University.

One of these ancient manuscripts, the Ebers Papyrus, was written about the year 1550 B.C., but in its compilation and editing may be dated back as far as the year 1900 B.C. Five columns of this Papyrus deal with obstetrics and gynaecology. The obstetric rules and prescriptions relate to the acceleration of parturition; to the methods of producing abortion; to affections of the female breasts, and to the birth prognosis for the new-born child, which depend upon the nature of its first cries and its way of holding its head.

Further references to midwifery practice contained in this Papyrus and others, such as the



Kahum and Westcar Papyri, written about the same time, were special instructions and tests for the diagnosis of pregnancy, some of which, I am afraid, are a little out of date, but nevertheless interesting. For example, one reads : "The woman is to soak two sacks (one containing wheat and the other barley) in her urine for a whole day. If they germinate, she is pregnant. If the wheat only germinates, she will have a baby boy, and if the barley only sprouts, she will have a baby girl."(Sounds an easy method, doesn't it?)

These documents, written about the fifteenth century B.C., are of more importance historically than medically by the fact that the opinions expressed in them, especially those referring to the signs of pregnancy, are almost identical with the teachings of the great Greek physician Hippocrates and the great Roman physician Galen, who lived nearly one thousand years later. However, it is reasonable to assume that long before these writings came into existence midwifery had gone through a number of phases of development, even amongst the savage races, which may have formed a basis for our

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present-day knowledge of midwifery practice.

In the most barbarous conditions of all the woman about to be confined was left to her own resources without any help from anyone, nor indeed did she seek any. The woman would often give birth to her baby out of doors, taking refuge in the woods or jungle, and choosing a spot near a stream in which she could bathe herself and the child immediately after delivery. The separation and treatment of the umbilical cord to prevent bleeding was done by either ligaturing it with vegetable fibres or by crushing it either with her teeth or by stones. The Maori women of New Zealand often gave birth to their babies in this way, as did some of the Malay tribes. Many of the Arab women have been known to have had their babies on the roadside, picked them up in their arms, and gone on their way.

Whilst the women among the peoples already mentioned generally go a little apart for their delivery, we find in some tribes a total lack of any regard being paid in respect of this. A confinement to them is a physiological act, at which anyone, even children, may be present, and it usually takes place in a public street. Parturition in the Hawaii Islands is said to have been formerly a public act, at which anyone who happened to be about could look on. Luckily, these barbarous customs soon became extinct, and as the tribes became more civilized the woman was taken to a hut or lying-in house, where some primitive preparations were made for the reception of the new-born.

The primitive tribes varied in their obstetrical procedure, and in the majority of them now in existence increasing skill was bound to lead to a higher degree of obstetrical knowledge.

It was only natural then, even in the most primitive tribes, that the woman in labour, crying out in her anguish, should evoke the sympathy of those around her, who would naturally come to her assistance to render whatever help they could. Therefore, we must regard it as a slight cultural advance when it became the custom for the husband not to forsake the wife in labour, and to remain by her side, rendering her whatever assistance he could. In some cases, however, the husband only acted as a supporter of the wife, on whose lap she sat, holding her from behind and pressing on her abdomen and uterus to help ease her pain, while a woman-friend of hers assisted in delivering the child.

This led to a further development in some tribes, such as in the Philippines and Hawaii Islands, where the function of the husband was handed over to a specially trained man called a tineador. These tineadors acted as male assistants, and some of them became much in demand, depending on their skill in relieving the distress of the woman in labour. History records one such person, a carpenter by trade, living in Thuringia at the beginning of last century. This man gained such a reputation as an assistant at confinements from the fact that women sitting in his lap had a much easier delivery. He was, therefore, much in demand, and his calls to attend midwifery cases at all times were getting rather too much for him, so being of an inventive turn of mind, and a carpenter, he saw a way out, and invented and constructed our first-known aid to midwifery – the parturition chair.

That is the story of the origin of the parturition chair, believe it or not. This most elegant piece of antique furniture was originally a somewhat crude, low, four-legged easy chair, with a low-back inclining backwards. In the seat was cut such a large oval piece that there was very little of the seat left, except a narrow rim. In this, shall we say, uneasy chair the woman was placed in a sitting position, instead of in some person's lap – the attendant squatting in front to help in the delivery of the baby.

These parturition chairs, of which there were many modifications, became an essential part of the armamentaria of the midwife, and she travelled from one case to another, always bringing her chair with her. (Unfortunately, there were no bicycles in those days, so she could not strap it on to the carrier behind.) This sitting or squatting posture for the woman in labour was almost universal in those times, and from specimens of earthenware, discovered by archaeologists, depicting labour scenes, they are most consistent in representing the woman in labour in this sitting position. Some of these relics date back thousands of years B.C., and it is questionable whether or not this is still the most natural position for the delivery of a child.

Dr. Kathleen Vaughan, in her book, "Safe Childbirth," advocates this position, and receives very favourable criticisms from such eminent opinions as the late Dr. Howard Kelly of Baltimore and the late Dr. Henry Jellett of the Rotunda, who, in his book, "Maternal Mortality," states : "That the modern

practice of confining the patient lying on her left side is wrong." He continues : "I think, however, that the woman will deliver herself with less effort when she assumes the squatting position during the second and third stages of labour than when she is lying on her side in bed."

We might now consider how midwifery developed among the modern civilized nations of Europe. In doing so, we shall meet conditions like those which maintained in the savage tribes, but, fortunately, these primitive conditions were soon influenced by the more civilized nations. Midwifery in Rome developed under the influence of Greece and also, later, the Arabs derived a great part of their obstetric knowledge from Greek sources. On their teaching again the scientific midwifery of mediaeval Europe was built up.

It is, however, to the writings of Hippocrates that we owe our first real attempt to further the art of obstetrics, for this great physician, who was born about 460 B.C., had a sound knowledge of anatomy and the bony skeleton, and foresaw the dangers to mother and child that may accompany pregnancy and labour – also discussing the treatment of haemorrhages at childbirth. Hippocrates had many followers, and his teachings formed the ground work of all the medical works of that time, and, indeed, for many years after.

From the earliest times the practical side of midwifery was entirely in the hands of the midwives, and the attendance and management of the woman in labour was looked upon as outside the province of the physician, except when he was called in, in very exceptional cases.

Even in the portrayals of birth and the lying-in houses, which adorn the walls of the ancient Egyptian temples, it is interesting to note that the medical male gods (of which the Egyptians possessed many) are never included, while there are many representations of the goddess Isis, who was recognized as the goddess of birth.

The midwives of these times were drawn from the poor uneducated classes, usually older relatives of the family, and ones with personal experience of having given birth to a baby themselves. Their knowledge of midwifery, however, was very scanty, there being no proper organisation for teaching or training them, and what little knowledge they possessed was only acquired by experience, and that very often at the expense of the lives of their unfortunate patients. Besides being ignorant of their work, they were unfortunately very often depraved and unscrupulous in their methods, indulging in such crude practices for hastening the birth as pounding the abdomen, shaking the patient, and even going to the extent of standing on the abdomen to massage it. They were not adverse to using drugs and other means for producing abortion – quite a common practice, as a matter of fact, in those days.

Soranus, a great Roman physician who lived in the second century after Christ, did much to try and elevate the standard of midwives, and wrote several books on midwifery and diseases of women, and to him goes the credit of being the first man to introduce the treatment by Podalic Version, a system, as you know, still in use up to the present day. His ideas of the qualities necessary in a woman who is going to be a midwife could not be improved upon, even in the present day. He writes: "She must have a good memory; be industrious and patient; moral so as to inspire confidence; be endowed with a healthy mind, and have a strong constitution; and finally, she must have long delicate fingers, with nails cut short." But to be a good midwife, according to Soranus, involves still other excellent qualities. She must have theoretical, as well as practical training, and be experienced in all branches of medicine, so as to give dietetic as well as surgical and pharmaceutical prescriptions, in order to draw correct conclusions from what she observes, and to be able to attach the proper importance to the relationship of the individual phenomena of the healing art. She must encourage the patient by cheerful talk, help her sympathetically, be unflinching in any danger so as not to lose her head when giving advice. She must, besides, already have given birth to a child and must not be too young. She must see that her hands are soft and tender, and must not do work that would make them hard. If they are not soft naturally, they must be made so by softening ointments. Remember, that was written about seventeen hundred years ago. Would we expect more from our present-day midwives ?

From the second century right up to the sixteenth century, medicine suffered a severe setback, and the teachings of Hippocrates, Soranus, and the other Greek physicians were almost forgotten. Superstition gave place to rational medicine, and

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disease was regarded as possession by devils. Midwifery was still in the hands of the midwives, who now had monopolized the whole practice of midwifery, the physician no longer being brought in to assist at the delivery, and, indeed, most of the physicians had given up the practice of midwifery altogether. The art of obstetrics was almost lost, and suffering, disease, and death were too frequently the reward of the pregnant woman. Midwives got more careless, and sepsis following the birth became quite common. Things went from bad to worse, and the mortality from child-birth reached alarming heights.

About the year **A.D.** 1529 a young French physician called Ambrose Paré did much good work to revive the education of midwives, and there began a fight between the physicians anxious to improve the practice of midwifery and the midwives who were striving to retain their hold on it to the exclusion of the doctors. The prudery of the times militated against the doctors, who were in some cases obliged to carry out their work under cover of a sheet. Paré improved the operation of Podalic Version, and saved many lives by its use. He became an ardent worker on the healing of wounds, and his work in the Hotel Dieu Hospital in Paris, and afterwards in the army, did much to advance the art of surgery in this direction.

CAESARIAN SECTION.

About this time Caesarian Section became known, and I think I might digress for a while, and give you a brief history of its beginnings and progress.

As regards the origin of the term Caesarian, this is more or less obscure. For a long time it was popularly believed that Julius Caesar was brought into the world by this means, and that he obtained his name from the operation by which his birth was accomplished (a Cesa Matris Utere). It is almost certain, however, that this derivation of the name is incorrect, since his mother, Julia, lived many years after his birth, as is proven by his letters to her. At the time when Caesar lived the operation was not known to have been performed on the living woman, at least in countries under Roman rule.

The most likely explanation is that, in 715 B.C., Numa Pompilius, King of Rome, codified the Roman law, and in this lex regia, as it was called, it was ordered that abdominal section should be performed on all women who died in advanced pregnancy, so that mother and child might be buried separately. The lex regia became lex cesarea under the rule of the emperors, and the operation became known as the cesarean operation. Caesarian Section on the dead was probably practised by the early races, and was not unknown to the early Egyptians, but on the living subject it is of more recent date.

Perhaps the strongest suggestion of the possible early development of Caesarian Section on the living among uncivilized peoples is furnished by the operation, witnessed by Dr. Felkin in Uganda in 1879, performed by a native specialist. The operator evidently possessed distinctly more knowledge of asepsis than his civilized confreres of that period, since he washed his hands and the field of operation with banana wine before operating, instead of deferring the cleansing of his hands until after the operation, as was more or less common in civilized practice at that time. The patient was anaesthetized by being made drunk with the same preparation. A rapid incision of the abdominal wall and uterus was done, the child removed, and the cord cut. The placenta was then removed, the cervix dilated from above, and the uterus was massaged and compressed to check haemorrhage. The peritoneal cavity was cleansed of liquor and blood by raising the patient up, and then the abdomen was closed by means of pin and figure of eight sutures. The wound was dressed with a paste of crushed herbs. The wound healed in eleven days, and the convalescence was only slightly febrile, with a temperature remaining under 101° throughout the whole puerperium. Such a well-developed technic suggests that the operation had been under development for a long time, and it seems very possible that Caesarian Section may have been practised among certain barbarous races with success, perhaps for centuries, while among civilized surgeons it remained an operation of the greatest danger.

The Caesarian Section performed by Christophorus Bainus in Italy in the year 1540, and described by Donatus, has become famous. This is the first quite indubitable case of a real Caesarian Section performed on the living in Europe. The operator is described by Donatus as one of those people “qui per villas percurrentes peregrinantur.” A dead child was extracted, and the woman gave birth to four more children in the natural way.

At the beginning of the seventeenth century a doctor, named Peter Chamberlen, practised in London as the first, and indeed very distinguished,

obstetrician. He recognized the evil state of the profession of midwife at that time, and in the year 1616 made the humane and sensible proposal to the king, "That some order may be settled by the State for the instruction and civil government of midwives." Had this well-meant proposal been agreed to, England would have had the honour of being the first among all the countries to have regulated the profession of midwife, and the population of the country would have had trained and controlled midwives one or two centuries earlier that actually happened.

Chamberlen's son also became a doctor in London, and did an enormous practice. In 1646 he wrote a famous book, in which he deplored greatly that his father's advice had not been followed, and described convincingly the distress caused by untrained midwives.

Peter Chamberlen became famous as the founder of a remarkable family – nine of his descendants became doctors. It was to the son of the elder Peter Chamberlen that we owe the discovery of the midwifery forceps. These were very crude instruments at that time, but their use was the means of relieving much suffering and saving many lives. Unfortunately, the discovery of the forceps was kept a family affair, and the secret was handed down from father to son for almost the period of a century. At last, the secret of them was sold to a Dutch physician, who tried to follow the Chamberlen idea. However, a French surgeon, named Jean Palfyn, introduced another midwifery forceps about the year 1700 and, unlike the Chamberlen family, he laid his model before the Paris Academy for the benefit of the medical profession generally.

In spite of all these advances in midwifery – Podalic Version, Caesarian Section, and the forceps – pregnancy was still taking an enormous toll of the lives of women during labour. This was due to the infection following labour or, as we call it, Puerperal fever. The mortality from this cause was appalling – something like 25 per cent.

Ludwig Semmelweiss, born in Budapest about 1818, did a lot of work in the University of Vienna on puerperal fever and sepsis, and discovered that the infection was often carried to the patient by the uncleanliness of the hands of the midwife and want of cleanliness in the preparation of the patient. He found that by using chlorate of lime for disinfection of the hands, his mortality from puerperal sepsis greatly diminished. He and several others of that time, including workers in England and America, sought hard to discover the cause of infection, and it was about the year 1845 that the great and distinguished French chemist, Louis Pasteur, made a discovery that was to revolutionize the whole system of surgery. He discovered that the cause of infection and the formation of pus was due to living organisms or bacteria, which were only visible with the aid of a microscope.

Lister (born 1827), the son of a Quaker, became Professor of Surgery at Glasgow University, and it is to his work on the destruction of bacteria that we finally came to control infection. He searched for a chemical substance that would kill them, and discovered the properties of carbolic acid in this direction. Hence was born antiseptics.

The important discoveries of Pasteur and Lister opened up a new road to surgery and, of course, obstetrical surgery. It was now possible to prepare the site of operation thoroughly, and the work could be carried out with antiseptic precautions. The operation wounds now healed and the mortality rate fell considerably.

ANAESTHETICS.

Another great advance in the practice of midwifery occurred about this time. I refer to anaesthetics.

Sir James Simpson became Professor of Midwifery at the University of Edinburgh, and in 1847 he discovered the anaesthetic properties of chloroform. He tried it out with great success in a confinement case, and published his results. He was met with a torrent of abuse. The use of chloroform was generally denounced from the pulpit. The Scottish clergy especially were vehement in their attack upon the morality of using anaesthetics for the relief of pain at time of birth, and only after a long struggle, in which the Queen of England took an active part by allowing herself to be anaesthetized at the birth of her son Edward VII, was relief from the agonies of child-birth considered as reconcilable with the Christian faith.

Now I intend to bring my paper to a close, as it was not my intention to touch on the subject of modern midwifery practice, and so let me thank you all, ladies and gentlemen, for the patient way you have listened to a drastically cut and, I am afraid, rather boring paper.