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WHERE IS OUR LOGIC?

It was not difficult to choose a subject for my talk tonight. My greatest medical interest throughout the years has been the care of the expectant mother. My difficulty lay in deciding how to present my subject. The many learned ones here know so much. Our visitors are not interested in medical details and statistics. The whole historical background of obstetrics has always fascinated me. Looking back from the vantage of the twentieth century, one can trace what appears to us to be a strange lack of logic. Perhaps that is how one generation always views another. Time would not permit me to enter into every detail. Therefore I decided to develop my theme by looking at a few landmarks along the way, keeping in mind my question, 'Where is our logic?' Some of my statements may sound provocative, but perhaps that is the privilege of a President!

Birth is not a new and rare disease. It has been with us since the beginning of mankind. Yet it is almost unbelievable, in the light of our present knowledge, that the practical application of the study of birth has been so slow throughout the ages. This story of the slow evolution of obstetrics, with its strange pendulum of change swinging backwards and forwards, with many of its mysteries still unsolved, is one of intense interest. Yet so many of the discoveries in retrospect seem to be the outcome of logical thinking. Why have we been so slow to apply this logic or even to recognise it in its own age? Always there seemed to be an opposing force to a new idea and the central figure – the expectant mother – appeared to be forgotten in the clash of wits. To unfold the story of the evolution of midwifery one must begin with the midwife. One of the earliest mention of the word 'midwife,' apart from the Bible, is contained in the dialogues of Plato in which Socrates, born in **B.C.** 491, the son of a midwife, likens his art to that of a midwife practising on the souls of men when they are in labour and diagnosing their condition, whether pregnant with the truth or with 'some darling folly.' To quote, "The midwives know better

than others who is pregnant and who is not. And by the use of potions and incantations they are able to arouse the pangs and to soothe them at will; they can make them bear who have a difficulty in bearing and, if they think fit, they can smother the embryo in the womb."

That was a picture of midwifery as it was seen in the fifth century **B.C.** The midwife from the earliest times was the most important person to the expectant mother, and indeed the only person available. Even among the most primitive races, it was recognised that a woman in childbirth needed some assistance. Usually the mother, when in labour, retired from the tribe, accompanied by a friend or an older woman, preferably one who had already borne children – and this woman became the prototype of the midwife of today. This service of helping to bring into the world a new human being was left for centuries in the hands of untrained and unskilled women, many of whom were of the type immortalised by Charles Dickens in his 'Martin Chuzzlewit.' In those early days it was not unknown for the midwives,

unskilled as they were, to perform Caesarian Section upon the dead. Some religious laws dictated that this must be done if the mother died. Midwives even procured abortion, if desired, because under the Hippocratic Oath it was not ethical for doctors to do so. Indeed, up to the thirteenth century it was forbidden for physicians to attend normal cases of delivery. The doctor in the Middle Ages did not perform surgical operations – such things were below his professional dignity, and were left to whoever cared to undertake them, regardless of his qualification to do so. In 1580 a law was passed in Germany to prevent shepherds and herdsmen from attending women in labour – an indication of conditions in the sixteenth century.

It is almost unbelievable that it was not until 1813 that a medical organisation – the Society of Apothecaries – appealed to Parliament to provide training for midwives and rules for the regulations of their practice. It is incredible that it was not until more than fifty years later that the movement for the registration of midwives and the setting up of the Central Midwives Board came into being. It is sad to relate that much opposition to the Bill came from within the medical profession itself, who looked upon midwives as their rivals. They feared that, with their skilled training, the midwives would be considered by the public to be as good as doctors. Yet in the earliest of days the practice of midwifery was scorned by the medical profession. "Midwifery is an unfit occupation for gentlemen of an academical education," wrote an eminent doctor to another. "An imposture to pretend that a medical man is required at labour," wrote another. And so midwives reigned almost supreme in the practice of midwifery until the early nineteenth century. How could we, the medical profession, allow such a state of affairs to exist?

The first Midwives Act, which was passed in 1902, contained a curious clause which stated that, in an emergency, it was the duty of a midwife to advise the relatives to call in a doctor, but take note, no provision was made for the payment of the doctor. I wonder what our doctors in the year 1964 would think of this omission! This was altered in the Midwives Act of 1918 when a doctor called in an emergency was paid by the local Supervising Authority.

Even with these Acts there were loopholes for illegal practice by untrained midwives – the payment was poor, and the work arduous with no provision for off-duty or sickness. The Midwives Act of 1963 improved conditions and gave midwives a salaried service with sickness and holiday pay.

Then we come to the Health Act of 1948 which did so much to revolutionise the whole aspect of medicine. It brought the free services of a general practitioner, a midwife, and a specialist to every expectant mother. With the complete advent of the doctor into obstetrics, midwives became maternity nurses. Then it was the turn of the midwives to complain that they could no longer follow out their vocation as their work was being usurped by the doctors. So the pendulum had swung round again. The important point is that now every expectant mother is entitled to the best possible care before, during, and after her confinement, but she had to wait many centuries before this was recognised.

Doctors in Obstetrics.

I have already stressed the background of the doctors in the field of obstetrics. It was a long time before the spirit of modern science was able to break down and overrule a certain sense of conservatism. It is amazing to think that midwifery only became a compulsory subject for medical students in the year 1854. One shudders to think of the untold misery that must have been caused by the interference – one can only use such a word – of untrained doctors who were summoned in an emergency by untrained midwives. Why did it take so long to realise that the bringing of a new life into the world required the utmost skill? Slowly the idea evolved that the expectant mother requires the services of a team – the cardiac specialist, the haematologist, the metabolists, the paediatrician. In the year 1964 the picture has changed from the days of the isolated midwife struggling on her own to a team of experts bringing all their scientific knowledge to the care of the expectant mother. It is now possible for the mother handicapped by a, disease – cardiac, diabetes – to compete with the healthy mother and to have a normal delivery of a healthy baby.

Ante-natal Care.

For centuries there did not seem to be anyone to suggest that some of the happenings in childbirth were preventable by the direct examination of the mother herself. It almost seemed that a mother came into labour, and one waited to see what would happen. Natural birth was defined as "when the child is bom in due season and in due fashion" – not a very explicit statement. Abdominal palpation was first practised in 1878 – less than one hundred years ago – following a classic treatise by Pinard from Paris. To us in this generation it seems such an obvious procedure. It is interesting to note that the methods

described by Pinard are still in use today. Abdominal palpation did not become an integral part of the regular teaching given to students and pupil midwives until early in the twentieth century. Even this idea of examining the expectant mother did not lay the foundations of ante-natal care as we know it today.

The story of Dr. Ballantyne of Edinburgh – the pioneer of the clinics of today – is well known to every obstetrician. He was appalled by the loss of foetal life at a time when the birth-rate was decreasing, and so advocated the use of a "Pro-maternity hospital for the reception of women who were pregnant but not in labour and where the case could be 'scientifically investigated,' " to quote his own words. The first bed was occupied in 1901, but it seems strange that there was a time lag until 1915 before the advantage of examining every expectant mother was recognised and the first outdoor ante-natal clinic as we know it today was set up. It is not perhaps appreciated that the Maternity and Child Welfare Act of 1918 made it obligatory for Local Authorities to arrange for the care of expectant mothers. These ante-natal clinics were set up by Local Authorities in many areas even before clinics were in use in some maternity hospitals. The Health Act of 1948 certainly did not appreciate this fact. How were the Local Authority Clinics to fit in to the new scheme? The maternity services, with its triparte administration, is always a subject for discussion. The expectant mother of today may have her ante-natal care from three sources during her pregnancy – the hospitals, the general practitioners, and the Local Authority. I heard Professor Duncan from Cardiff aptly remark, "The foetus is like a deep-sea diver with three men in a boat trying to rescue him." This triparte administration only works if there is co-ordination. I should like to thank Professor Macafee and the staff of the Royal Maternity Hospital; Mr. Price and the staff of the Jubilee Hospital and the general practitioners for their co-operation with the Local Authority in Belfast. Health visitors are attached to the maternity hospitals (and indeed to all hospitals in Belfast) and are of great assistance in the follow-up of mothers who have failed to keep appointments. This is a most important part of ante-natal care as we see it today.

So from a time when there were no ante-natal clinics, the pendulum has swung round, and today our many clinics are over-populated with hundreds of mothers patiently waiting, especially in our hospitals. True, the expectant mother was never so well examined as she is today with every possible test done in case there is some obscure disease lurking around, but have we time to realise that every mother is a separate individual with her own special brand of fears and fancies? What is the solution? I leave that question with you.

Breast Feeding.

In primitive countries all babies were breast fed – indeed they were forced to be because there were no other means of feeding. It is difficult for us to realise that even today, in this age of artificial dried milk, if for some reason a mother in some of these countries in the East is unable to breast feed her baby, that infant will surely die from starvation. One of the first printed books – indeed claimed to be the first – was written in German for the instruction of midwives, and with advice to expectant mothers, and in 1540 translated into English under the title, 'The Byrthe of Mankynde.' The original title was 'Rosengarten' ('The Garden of Roses for Midwives and Expectant Mothers'). This book held supremacy during the sixteenth and seventeenth centuries and I cannot resist quoting in some detail from it on a chapter headed, "Directions for the nursing of Children and how to choose a good Nurse."

"I am of opinion that it is fit for every mother to nurse her child because her milk, which is nothing but the blood whitened, which nourished the child in the womb and of which the child was conceived and formed, is fitted and more natural to the child than the milk of a stranger, . . . , but in case the mother, sick or weak, hath no milk or that her husband will not let her nurse her child, then it is necessary to look out for a nurse, but most men do know how hard it is to get one." That last sentence is surely revealing as it shows the important role the father evidently played in deciding on the care of the infant. I shall say more about this later.

And so in the early days all babies were breast fed, either by the mother or by a suitable 'wet' nurse as she was called. Breast feeding was recognised for many centuries as the natural food for the baby. Now the pendulum has swung round and within recent years there is almost a rebellion by the mothers against breast feeding. It is no longer fashionable. True the infants continue to thrive on their artificial dried milk, but what do the psychologists say about it all? The mother is the most important person to the child. It derives a great feeling of security by the close contact with the mother during breast feeding. Is the restless adolescent of this present age the outcome of this failure to breast feed? Who can tell? Today the whole question and problem of breast feeding has to be handled carefully, both from the infant's and the

mother's point of view. Many mothers – indeed the majority – are opposed to breast feeding, and an insistence on it by the doctor or midwife may only cause a feeling of guilt in the mother, and certainly can do much to strain the good relationship between the doctor and the expectant mother – an essential part of ante-natal care. That is the position as we see it in the year 1964. Perhaps the pendulum will swing back again, and once more breast feeding will be the fashion of the day. It is surely a sign of the times when an expectant mother asked me recently, "Are we not allowed to breast feed our babies now?" Is this lack of breast feeding in this present age failure on the part of the mothers – or failure on the part of the doctors to stress its importance? And yet do we, as doctors, really know the true value of breast feeding? If we do not, how can we advise?

Anaemia.

It is strange that, even after the discovery by William Harvey of the foetal circulation, no emphasis was laid on the importance of evaluating the HB. level of every expectant mother. In the old days venesection, even in midwifery, was considered to be beneficial in many cases, so that a debilitated mother quickly became even more debilitated. Now it is recognised that the HB. levels of all pregnant women should be checked frequently, and the ideal is that no mother should come into labour with a HB. of less than 80 per cent.

The latest available information in the perinatal survey states that one-third of the entire population of pregnant women never had a haemoglobin test carried out at any time during pregnancy. The mortality rate in these patients with severe anaemia (under 60 per cent.) was double the mortality of those patients with a haemoglobin level of 70 per cent, or over. This is a striking statement. Women of the child-bearing age with haemoglobins of 70 per cent, or under should have regular tests so that they do not begin another pregnancy with the added burden of anaemia. We may advise and give much treatment to improve the anaemia during pregnancy, but what efforts do we make to prevent its recurrence in a subsequent pregnancy?

Education for Parenthood.

It is only within the past 15-20 years that any serious consideration has been given to the education of the expectant mother. Dr. Dick Grantly-Read was one of the first to advocate some form of training during pregnancy, especially for labour. His book, "Childbirth without Fear," published in 1951, was read and valued by many of his patients. Immediately it divided the medical profession into two camps – those who said it was nonsense to try and train women to be mothers; others who cautiously said there might be something in it, but there were few enthusiasts. You will agree that an expert in any field has required training. Is it not logical that a mother should receive training and guidance in one of the most stupendous tasks which she is asked to perform – the delivery of her baby and its subsequent care?

It has always surprised me that we talk about the expectant mother. Should our concept not be the expectant parents. The psychologists lay great stress on the importance of the family as a unit, yet at the birth of part of a family, especially in hospital, so often the parents are separated, or shall I put it, it is not made easy for them to be together. I agree, of course, that the wishes of the parents should be respected. Some of the mothers have described to me that the birth of their baby was the loneliest experience in their lives. A husband, the father of four children, aptly described his experience to me when he said that the birth seemed to him to be a time "when all the females got into a huddle" and he was left on his own. This gives us a picture of how it appears to the parents even of today. This should not happen in the twentieth century. It is of interest to note that in the very earliest of times in some of the primitive races, following the birth of a baby, the father retired to bed and received the congratulations of the tribe while the mother continued in her everyday duties! It was felt that there was a very close bond between the new-born infant and the father. Therefore it was not wise or safe for the father to carry out his every-day pursuit of food hunting in case any accident should befall him and so bring evil upon the new-born baby. I do not think that we would advise that the fathers should be put to bed, but, in my opinion, it is not logical – indeed it is not right – to separate the parents so completely during the birth. A wider concept of the meaning of a family would do much to lay a solid foundation for the future well-being of this unit. The husband should be educated in the care of his wife during her pregnancy. It should be explained to him that his wife's whole system is undergoing a change. Special mention should be made of the emotional stress that occurs during pregnancy, and very often following delivery. The earlier discharge from hospital makes it imperative that the father and indeed the mother herself should be made aware of the possible occurrence of these seemingly unexplained emotional outbursts. This is specially important with a first baby, otherwise a feeling of

inadequacy to cope with the situation arises in the young parents, and what should be one of the greatest joys in life is missed and many precious things are destroyed. A completely scientific approach to this problem is not sufficient. One must also use imagination and have understanding of the situation. I speak from the experience of many talks with young parents.

This new psychoprophlactic approach to the mothers, whereby in a series of talks in the last few weeks they are prepared, or conditioned might be a better word, to accept the principle of painless childbirth, may have a place in their education. On the other hand, this new idea may be too scientific and not human enough. We want to try and give the mother the education she feels she needs, and not necessarily what we think she requires. I have seen a group of expectant mothers enthralled while a young mother, who has recently had her baby, brings him with her, and tells in her own way the simple story of her own experiences. The story is not told in scientific language, but it tells the mother what she wants to know.

We took a long time to realise that it was essential to educate doctors and midwives. How much longer will it be before we insist that parentcraft education should be an integral part of ante-natal care?

Post-natal Care.

It has been said that the index of the efficiency of the maternity services in any country lies in the number of occupied beds in the gynaecological wards of its hospitals. There is much truth in this. Great stress is laid on the importance of the post-natal examination of every mother six weeks after delivery. Is not this concept much too narrow? The aim should be the care of the mother during child-bearing years. Her health should be looked after in such a way that she does not begin another pregnancy with the disability in a previous pregnancy. This may sound an ideal, but in my opinion it is logical, and it ought to be within the bounds of possibility. If it is logical, it should be possible. Here I think is the place to bring in this question of planned parenthood – a vexed question, and so often shrouded in mystery even in this twentieth century. Obstetricians agree that advice should be given to a mother, if for health reasons, it is not advisable for her to have another baby. It is not generally acknowledged that marital difficulties often arise during and following a pregnancy, and these in turn may become psychological problems. Parents often wish to have definite medical advice on family spacing. Let me stress that at all times the wishes of the parents, and their religious beliefs, should be respected. Here I should like to pay tribute to the women doctors in Belfast who give their services in a voluntary capacity in the Family Planning Clinic.

There is another important point in connection with the after-care of the mother. Many mothers develop almost a guilt complex following a still-birth as they think that they are in some way to blame. A simple explanation makes such a difference, but the Belfast mother does not like to ask questions.

Landmarks in the History of Obstetrics.

Puerperal Sepsis.

It is only possible in the time at my disposal to mention a few landmarks, but no history of midwifery is complete without reference to that scourge of childbirth – puerperal sepsis – which cast its dark shadow from antiquity, and swept like a plague throughout the hospitals during the seventeenth, eighteenth, and nineteenth centuries – when maternity cases were first being admitted. The story of the discovery of the cause is dramatic, not only in its day, but for all time, and is well known to obstetricians. Semmelweis's instructions to the students in his hospital in Vienna to wash their hands in a solution of chloride of lime, after doing a post-mortem, met with much opposition. How could clean hands carry the disease? went up the cry. Our first thought here is to condemn this lack of logic, but we must remember that the science of bacteriology was yet unborn, and so Semmelweis in the year 1840 was in advance of his time and deserves the utmost credit.

The discovery of antibiotics in 1935 seemed to spell the end of all cases of puerperal sepsis. It certainly means that it is no longer a dread disease, but now the sepsis may be masked, and it is only at post mortem that the true cause of death is found. Germs in the year 1964 are still introduced in the same old-fashioned way.

Anaesthetics.

The discovery of anaesthetics by Sir James Simpson in 1847 should have marked the beginning of an era of profound importance for the expectant mother, with its promise of the relief of pain. What do we find? A violent controversy arose among the medical profession and even among the public. The Bible was quoted, "In sorrow thou shalt bring forth children." It was said that this proved that women must always be prepared to suffer pain in the performing of their natural function. Dr. Simpson

himself tried to come to the rescue and quoted that the Hebrew word 'sorrow' meant toil or labour, but even that did not satisfy the medical profession. It was only in 1853, when Queen Victoria insisted on chloroform for the birth of Prince Leopold, that anaesthesia became a fashion.

It is difficult for us to appreciate that insensibility to pain was completely unknown before that date and the words 'anaesthetic' and 'anaesthesia' were coined at that time by Dr. Oliver Wendell Holmes.

Placenta Praevia.

Placenta praevia was a dread occurrence in obstetrics over many centuries with a high maternal and foetal mortality. Prematurity was the chief cause of foetal death. It took a man of vision to see that the remedy was to prolong the pregnancy, yet without added risk to the mother. Professor Macafee's conservative method of the treatment of placenta praevia "arrested the attention of all obstetricians," to quote one book. It gained him international fame and the Belfast Medical School is justly proud of him. The saving of human life may be judged from the results:

In the year 1844, 30 out of 100 mothers died and the foetal mortality was not below 60.

One hundred years later the results were dramatic – 1 mother in 300 cases died and the foetal mortality was more than halved and is decreasing.

STATISTICS.

I do not think it would be logical to talk about the progress of obstetrics without the added proof of statistics. I shall do it very briefly:

Maternal Mortality

The earliest London records tell us that in the seventeenth century one woman in forty lost her life at the time of the birth of her baby.

During the years 1837-1935 there was a constant maternal death rate of 4.5 per 1,000 live births.

Today the figure is .3 per 1,000 births registered in England and Wales and in Northern Ireland.

Stillbirth Rate.

It has been almost halved in the past twenty years:

1944 – 27.6 per 1,000 births registered in England and Wales.
1962 – 18 „ „ „ „ „
1962 – 22 „ „ „ Northern Ireland.

Perinatal Mortality Rate.

31 per 1,000 births registered in England and Wales.
38 „ „ „ „ Northern Ireland.

Neo-natal Mortality Rate.

1928 – 29.8 per 1,000 births registered in England and Wales.
1962 – 15 „ „ „ „ „
1962 – 18 „ „ „ Northern Ireland.

Obstetrics have made many advances in the past forty years and British obstetricians have been foremost in the field of discovery. They have been described as "clear-headed and purposeful men, groping intelligently with their craft."

That is why the tragedy of thalidomide has made the medical profession pause and think. Now the injudicious use of some antibiotics in the early months of pregnancy has come under suspicion. It would seem that in the care of the expectant mother we must always ask the question, "Is this drug really necessary?"

What of the men of the past? I have not meant to be critical, but have tried to look at the scene of the discoveries throughout the ages from the point of logic. The doctors and the scientists who carried on in their day with their new ideas in spite of much opposition are indeed worthy of congratulation on their courage and tenacity.

The Utopian dream of obstetricians has yet to be realised – painless childbirth with no maternal and no foetal deaths.

The more difficult the problem the greater the challenge. Working with the human body with its complexity, with the human mind with its individuality and, above all, working with the mystery of a new life, calls forth the best in every physician.

I wonder what the President of the Ulster Medical Society, one hundred years hence, will have to say about our generation? Will he (or she) be amazed that all the births did not take place in a hyperbaric oxygen chamber – that we were unable accurately to predict the sex of a baby or to tell the day and the time of the onset of labour; that we could find no cause for pre-eclamptic toxaemia? Will he also ask the same question: "Where is *their* logic?" – and where *is* our logic?