MILESTONES IN MIDWIFERY*

By JOHN H. PEEL, M.A., F.R.C.S., F.R.C.O.G.

Obstetrician and Gynaecological Surgeon, King's College Hospital and Princess Beatrice Hospital.

In these days the practice of obstetrics has reached a level that seems almost inconceivable when one goes back but a few hundred years to consider the art as it was practised then. Nowadays if we have a case of contracted pelvis we can do a Caesarean section. If there is delay in labour, due to a bad position of the baby or to inadequacy of uterine action, we can deliver the patient with forceps. If we have a case of ante-partum haemorrhage, or toxæmia, we can induce labour. If, as a result of any of our interference, sepsis arises, we can administer blood transfusions, penicillin and sulphonamides. If we go back to the year 1500, not one of these procedures was known or practised.

I choose the year 1500 because it was in that year that we read of the first recorded case of Caesarean section on a living patient with survival of the mother, and a few years later that great French surgeon, Ambrose Paré, was born.

There would be enough material to cover a lecture on primitive methods in obstetric practice before that date. In the vast majority of cases, of course, a normal pregnancy is preceded by a normal labour and puerperium, without the necessity for any kind or sort of interference. Because of that fact, the human race survived. But imagine, if you can, a condition of affairs in which there was no antenatal care; the patient presented herself to a midwife whose knowledge of midwifery was based entirely on experience without instruction when her labour started. If everything was normal, well and good, but if any abnormality arose, then almost invariably the baby, and more often than not, the mother died. Nothing was known of the prevention and treatment of toxæmia, and the whole range of conditions which go under the name of dystocia or difficult labour had to be met and

dealt with if, and when, they arose. The methods at the disposal of the midwife were crude to a degree. More often than not nothing active was done at all, but in those superficially devout ages invocations to the Deity and solemn incantations did considerably less harm than such active steps as might be taken. Assistance in labour took the form of such crudities as anointing the abdomen and vulva with various medicaments, exposure to various forms of vapour baths and fumigation and, sometimes, more direct violence, such as kneading the abdomen, violent fundal pressure and the like.

In many cases, after the midwife had failed the physician was sent for, but it was many years before the physician became popular in the lying-in room. This was not entirely due to prejudice against him. It was due, in part, to the fact that obstetrics was considered beneath the dignity of the physician, and partly to the fact that when he was summoned the patient was nearly always in extremis and all he could do was some form of mutilating operation which usually led to the death of the mother as well. The instruments at his disposal was a simple knife, the hook or crochet, and various types of fillet. To the physician of those days, the main problem was whether embryotomy should be performed only on the dead child or whether it was justifiable, in the hope of saving the life of the mother, to do an embryotomy on a living child. In the majority of cases, this must have been rather an academic argument because they had few certain methods of determining whether the child was, or was not, alive. In practice, it meant waiting nearly always until the labour had dragged on for days, and the mother was utterly exhausted and the child dead. Such embryotomies must have been gruesome and

* Presidential address delivered to the Listerian Society of King's College Hospital, 1947.

A Caesarean operation in the Seventeenth Century

barbaric procedures, and the following description is worth reading in detail :—

‘When the child cannot be brought forth, the physician may employ the knife in such a way that he by no possibility cuts a living child with it, for if the child is injured the physician may destroy both mother and child together. Having cheered up the woman, he then grasps in his hand the sickle-shape knife, cuts in pieces the head of the (dead) child, drags down the cranial bones, seizes with a hook the breast or shoulder of the child, and draws it out by the cut head, the eyes or the chin. If the shoulder is near, he cuts off the arm close up, makes an incision into the abdomen, distended like a bellows, or filled with air, extracts the intestines, and draws it out by the cut head, the eyes or the chin. Whatever limb, however, the physician seizes must be cut off and drawn out, and he must preserve the woman carefully from injury.’

The dawn of the 16th century is the first big milestone in the evolution of obstetric practice. The ancient Jews, Egyptians, Greeks and Romans achieved a certain degree of knowledge about obstetrics which is, at times, quite remarkable, but most of what they thought and practised seems to have been lost in the Middle Ages in Europe. Certainly this is true of obstetrics.

In 1510 Ambrose Paré was born. Now this famous French surgeon is perhaps better known for his contributions to surgery. He worked in the Hotel Dieu in Paris, but in those days, as in these, the civilian surgeon and accoucheur was frequently called to the field of battle. Consequently we find Ambrose Paré careering all over Europe and being present at sieges of innumerable cities and towns. It was

in these fields of battle that Paré showed himself the true experimenter and pioneer in new methods. It was the custom in those days to treat the horrible lacerated wounds of the soldier by cauterizing the surface. The methods of cautery employed were either a red hot iron, or boiling oil. The primary motive in such applications was to stop haemorrhage, but the disastrous effects are not difficult to conceive. One day Paré ran out of his supply of boiling oil, and consequently some of his patients had their wounds dressed with balm and, to his surprise, next day he found such cases were in far better shape than those who had had the recognized treatment. From that day, he abandoned all forms of cauterization of wounds and, later, was the first to introduce the practice of ligaturing severed blood vessels. Subsequently he paid the greatest attention to details in doing dressings. Paré disclosed his true greatness and modesty in that famous saying of his :—

‘I dressed their wounds, God healed them.’

Paré’s contributions to obstetric art were equally important. He advocated the suture of lacerations, quite a new departure at that time, but his most important contribution was that of podalic version. The practice of turning the baby in utero had been mentioned by one author before him, and that was Soranus of Ephesus, who practised medicine in Rome in the time of Trajan and Hadrian. Exactly what method he advocated is not clear, nor is it clear if he advocated that it should be done. It would appear, however, that he referred chiefly to turning the baby from transverse position into a cephalic position during the early stage of labour, but version seems to have been lost for nearly 1,500 years until Paré re-introduced it. He advocated podalic version in cases of transverse lie where the child was still alive, but he went further than that ; he advocated it as a method of treating antepartum haemorrhage, so that it would appear that he was really the first to rupture the membranes and bring down the leg in cases of placenta praevia. His methods were also applicable to cases of head presentation where the pelvis was contracted.

The story of the birth of a son to one Marguerite de Puis in the year 1548 is well

worth the telling, assisted as it was in the end by the great Paré. This young bride of 11 months was expecting her first child—all preparations had been made and the famous midwife, Louise Grisson, had been chosen for her great knowledge of the midwives' art. Poor Marguerite laboured through several days and nights, attended by Madame Grisson, her Aunt Thérèse, and two cousins, Anne and Renée, but there was still no sign of the birth of the child. Francois, the anxious husband, became restive. The famous Barber Surgeon must be summoned. Madame Grisson and Aunt Thérèse were aghast at the idea of a man in the sacred lying-in chamber, but the younger cousins were on the side of Francois. Rumour had it that the great man had some new method of delivering women. And so the councils of the younger generation prevailed and Paré was sent for. The great man soon came and offered up a sacred prayer before he entered through the door of the sick room.

'In the lying-in chamber he at once became master of the situation, assuring Marguerite that her pain would soon be over. He placed her athwart the bed, raising her buttocks on a hard stuffed pillow, and propped her back with a bolster, so that she was half sitting, half lying. He instructed her to bend her knees and to draw her heels close to her body. She was bound in this position with a broad linen bandage, the bandage was hung about her neck and crossed over her chest, and made to encompass her feet, legs and thighs. Maitre Paré applied it so tightly that she was unable to move. To reinforce this vice in which she was held, the bystanders firmly grasped her legs and shoulders. Her privy parts and thighs were covered with a warm double cloth, that neither air nor wind might enter into the womb, and the operation might be done with more decency. Paré noted the mask of terror which disfigured Marguerite's face, and once more assured her that all would be well. They then laid her head upon a bolster and put a cloth over her eyes.

'He took off his two finger rings, the one the famous 30-écu diamond given him by Monsieur d'Estampes, and the other the seal of Monsieur de Rohan, under whose banner he had campaigned in lower Brittany. He crossed himself and without further pre-

A room in the Hotel Dieu

liminary rolled up the sleeves of his doublet and annointed well his bare arms and hands with oil. Further, he lifted the modesty cloth and poured much oil into the birth passage to make it slippery. He inserted his hand to determine the form and situation of the child. Immediately he encountered the intact bag of waters which he broke between two finger nails, kept especially long and sharpened for this purpose. A dark turbid fluid gushed forth, and all who watched knew by that sign that the babe would be lost unless delivery could be speedily effected.

'He pushed up the head which presented, and dexterously turned the child in the womb so that it came feet foremost. Despite the imprisoning bandages Marguerite struggled and writhed in agony. She was bathed in a cold sweat. He brought forth one foot and a little above the heel tied a silk band indifferently tight. He then returned this foot into the womb, leaving the loose end of the band protruding, and manoeuvred to bring down the second foot. When he had accomplished this, he pulled on the band attached to the first foot and it too came forth. He grasped both feet close together and pulling on them, delivered the buttocks and genitals of a male child. A murmur of excitement ran through the room, and Renée went out to tell the men that for some woman as yet unconceived a lover was being born. By this time all the women kin had crowded into the small room to be present at this miraculous and new operation, for just within the month Paré had published his book, which contained a chapter on the method of extracting an infant from the belly of the mother when Nature was not able

The squatting position, the parturient supported by the faithful friend. The accoucheur blows warm vapours on the patient's vulva, thus softening the parts and overcoming any rigidity of the maternal soft parts

to bring it forth. The midwives were amazed, the relatives astonished—all seemed to enjoy the spectacle, though poor Marguerite still screamed. Paré made further traction on the feet, and soon the belly and then the chest appeared. He then slipped a hand into the womb past the baby, and placed one of its arms above its head and the other alongside its body, because only when the arms were so could the child pass out of the womb. He directed the midwives to help by pressing the patient's belly downward with their hands, and at this juncture exhorted Marguerite to close her mouth and nose, and to drive her breath downward with great violence, but she was too exhausted to be of much assistance. By the combination of pulling and pushing the boy was born.

'His part completed, Paré withdrew to the hall, where the women crowded about him with congratulations. He was further complimented by Francois and the other men. With becoming humility he said that praise and thanks were due to God alone, for if He had not inclined His ear unto his petition, delivery could never have been effected. Francois opened his purse and counted out ten silver écus. Affected by the uncommon generosity of his host, the master Barber Surgeon determined to remain in the house in case he could be of further assistance.'

And so poor Marguerite's son was delivered alive, where otherwise he would have perished and probably Marguerite as well.

Although to Paré must go the credit for this tremendously important innovation, he did not succeed—to use a modern colloquialism—in

'putting it across.' It was left to Guillemeau, and the more famous Mauriceau, in the succeeding generations to popularize the methods which Ambrose Paré preached.

Here at last was the practical method of extracting a child with reasonable rapidity, and thereby saving the life of the child quite frequently and, still more frequently, the life of the mother. It is said that Ambrose Paré was the only Protestant to escape the famous Massacre of St. Bartholomew in 1571, due to the special intervention of Catherine de Medici, whom he had served. But two years before that famous night, another Huguenot escaped from Paris and landed in Southampton. That was William Chamberlen, the founder of the famous Chamberlen family. That family played a vital part in the practice of obstetrics during the next 150 years, and their fascinating story is unique in medical history.

William Chamberlen's chief claim to fame is that he was the father of five children, of whom the eldest and youngest were both called Peter and both were surgeons. Peter the elder was born in 1560 and came with his father to England in 1569, and he later became a member of the Barber Surgeons Company in London. It was he who was in all probability the inventor of the famous iron tongs, but we know less of his activity with these instruments than of his constant controversies with his colleagues, the Barber Surgeons, and with the College of Physicians. He was constantly in bad odour with the former for failing to live up to his professional and social obligations. The

Accouchment to music, the jazz band artists, prototypes of which may be heard in most modern flats in the form of gramophones or wireless.

Partially suspended attitude for difficult labour. The patient kneels and during a pain is hauled up by two lusty women while the third exerts fundal pressure. The manoeuvre is said to be always followed sooner or later by the birth of the child. The results to the mother are not always happy.

College of Physicians arraigned him for prescribing drugs and not confining himself to the practice of surgery, and he was actually imprisoned in Newgate for this offence. He was released by the intercession of Queen Anne, because he had established himself as an accoucheur of considerable renown and had attended the Queen in her confinements. He subsequently attended Henrietta Maria, wife of Charles I. Peter the elder seems to have had great popularity in Court circles, and it may well be that a good deal of professional jealousy was at the bottom of the quarrels with the Barber Surgeons and the Fellows of the College of Physicians. Peter the younger was admitted to the Company of Barber Surgeons in 1596, and it is interesting to read that in 1600 he was licenced by the Bishop of London to lecture on surgery. Such was the position of midwifery in the year 1600 that an ecclesiastic had the final say in who should be allowed to practise the art. Peter the younger shared with his elder brother the disapproval of his colleagues and a great deal of popularity with his patients and with one section at least of the midwives of the day. These latter made a petition to the Privy Council and Attorney General that the midwives should be incorporated and made a 'Society'. The Chamberlen brothers sponsored this petition, but it was rejected by the influence of the College of Physicians who held in very poor

esteem the women who practised this art and still more the physicians and surgeons who assisted them in their difficulties. Peter the younger died before his elder brother, but he left behind him the best known, and in many ways the most arresting, member of the family, Dr. Peter Chamberlen. This boy had been given every opportunity of study by his father and he had been to Heidelberg and Padua to study and take his degree of Doctor of Medicine. He then studied at both Oxford and Cambridge, and was eventually admitted Fellow of the College of Physicians in 1626, but not without a rather offensive admonition from the learned authorities 'that he change his mode of dress and no longer follow the frivolous passion of the youth at Court and that he be not admitted until he conforms to the customs of the College and adopts the decent and sober dress of its members.' Dr. Peter Chamberlen very soon established a great reputation abroad and became a champion of the midwives. He endeavoured to do what his father had failed to do and was again opposed by the all-powerful College of Physicians, who opposed his endeavours to monopolize the licencing of midwives 'based on the presumption that he hath more exact skill than all the grave and learned physicians in the kingdom on those cases, for he threateneth that he shall not repair unto such women as are distressed whose midwives have refused to conform themselves to him.' But Dr. Peter himself continued to thrive, and in 1647 was appointed to attend the ladies at Court 'that with greater secrecy and ease their ladyships may be helped with their most troublesome and pressing affairs.' In 1660 he was appointed Physician in Ordinary to

THE CHAMBERLENS

Peter Chamberlen (1560-1631)
Inventor of the obstetrical forceps

Charles II. Besides his medical activities, Dr. Peter had a very active part in religious and political intrigues prior to the restoration of the King. It is interesting to note that these appointments followed his dismissal from the College of Physicians after a series of bitter quarrels and controversies, in which he was accused of unprofessional conduct in many ways. He published a lengthy defence of himself under the title of 'A Voice in Rhama or the Cry of Women and Children as Echoed forth in the Compassion of Peter Chamberlen.' In this document he refers on more than one occasion to the family secret.

Eventually Chamberlen was, like his father and uncle, dismissed from the College of Physicians for insubordination, and eventually died in 1683 at the age of 82 years—regarded by many as a madman.

However, the family tradition went on with Hugh Chamberlen his son, born in London in 1630. Hugh seems to have inherited most of the characteristics of his father and grandfather, and to have spent his life in bitter controversy with his contemporary physicians, though he never became enrolled on the list of Fellows of the College of Physicians so that he did not share the distinction of his father and grandfather in being dismissed. He practised midwifery widely and became a great success in Court circles. He was appointed Physician in Ordinary to Charles II in 1673, and was

admitted Fellow of the Royal Society in 1681. He was called for the birth of James the Old Pretender, but apparently James was a B.B.A. He subsequently had the honour to lay the Princess, Anne of Denmark, subsequently Queen Anne, of a son who immediately died. He had 100 guineas for his pains. He spent ten years of his life in a wild scheme for a hand bank—a proposal to make England rich and happy. The whole scheme was a colossal failure, and Hugh absconded to Holland with all the funds of the bank and never came back. He apparently did not leave the business with 'clean hands nor the country with honour :—

'To give you his character truly complete
He's doctor, projector, man-midwife and
cheate.'

However, before this catastrophic end Hugh had done midwifery a tremendous service. He had in 1670 visited Paris and met the great French physician, Mauriceau. At that time he tried to sell the secret of the forceps for 10,000 livres. He would probably have found a market, but for Mauriceau, who advised against acceptance. He had boasted of his progress with the secret and so Mauriceau produced a patient with severe rachitic pelvis and Hugh, after labouring for several hours to deliver the baby with the aid of his instrument, failed and both mother and baby perished. However, Hugh Chamberlen and Mauriceau were not estranged by this unfortunate incident. Hugh left the seed of an idea in Mauriceau's mind, who says :—

'The extraordinary difficulty which this case presented led me to invent an instrument, to which I have given the name of "Tire-Tête," because of its usage, which accomplishes its purpose incomparably easier and more surely than the hooks. If I had then had such an instrument, I am certain that with its help I could have saved the life of this woman. I have included a picture of it in my book, in which I have also described very accurately its method of use.'

Hugh returned to England and translated Mauriceau's book on obstetrics into English in 1672. This brought Hugh himself a considerable fortune, but undoubtedly presented English physicians with a book that set the standard of midwifery for many years to come.

In his preface to this translation we read the only direct reference to the forceps.

This translation was undoubtedly Hugh's greatest claim to distinction, and there is no doubt his effort was of inestimable value to British midwifery, because Mauriceau was undoubtedly the first obstetrician of his day. Many years later when Hugh had to leave England, he did eventually sell the secret of the forceps to Roger van Roonhuyze in the early years of the 18th century. It is said that even here Hugh Chamberlen cheated and sold only half the instrument, the vectis or lever, but this is not really an established fact, and there is little doubt that in the early 1700's the forceps came into fairly general use, both in England and on the Continent.

The last of the Chamberlens was Hugh junior, who seems to have departed from family tradition—born in 1664, he took his Cambridge M.D. and, subsequently, the equivalent of the modern M.R.C.P. of the College of Physicians, later to be elected a Fellow. He even appears to have turned the family table and preferred charges of malpractice against one Gort, a surgeon, for prescribing internal medicines to one of his patients, in the very best and orthodox practice of the day. He was subsequently made Censor of the College, and ended a wholly respectable, but thoroughly dull, life in 1728, and even had a bronze tablet erected after his death in Westminster Abbey. Such is the estimate of fame by contemporaries.

The last chapter of interest in the life of this remarkable family was the final discovery of the actual instruments used by the first Chamberlens. The forceps were discovered by accident in the family residence of Woodham Mortimer Hall in Essex. The house had been sold in 1715 by one of the less known members of the Chamberlen family to William Alexander, a wine merchant, and he in turn left the house to the Wine 'Coopers' Company. The

The forceps

discovery of the forceps came nearly 100 years later and were secured by a local doctor, one Dr. Carwardine, and were presented by him to the Royal Medical and Chirurgical Society of London in 1818. In his address he states :—

'The principal entrance to the mansion is through a porch, the masonry of which being carried up with the building, serves as closets to its respective stories. Two or three years ago, a lady with whom I am intimately acquainted (and from whom I had the particulars), discovered in the floor of the upper closet a hinge, and tracing the line she saw another, which led to the obvious conclusion of a door, this door she soon found means to open. There was considerable space between the floor and the ceiling below, and this vacancy contained divers empty boxes, etc. Among these was a curious chest or cabinet, in which was deposited a collection of old coins, trinkets, gloves, fans, spectacles, etc., with many letters from Dr. Chamberlen to different members of his family, and also the obstetric instruments. Being on terms of intimacy with the family resident at Woodham Mortimer Hall, these instruments have been presented to me, and I have now the gratification of depositing them with your Society for the gratification of public curiosity, and to secure to Chamberlen the meed of posthumous fame due to him for his most useful discovery.'

(To be concluded)