

Obstetrics: art or science?



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Clearly, obstetrics is both a science and an art, but the balance has altered through the centuries of recent history and it is interesting to reflect on the changes.

Where better to start a discussion about the nature of obstetrics than the Hippocratic Oath, particularly the words of the modern version by Louis Lasagna in 1964: 'I will remember that there is art to medicine as well as science and that warmth, sympathy and understanding may outweigh the surgeon's knife or the chemist's drug.'

Until about 150 years ago, warmth and compassion were all that could be offered to women, but prior to that

time, observations were recorded, gathering information about aspects of pregnancy. Quite a lot was known about normal and abnormal obstetrics and remedies were being developed. For many centuries, medical men attended women in their 'confinements' and women gave support. Some historical points are surprising. The obstetric forceps were probably invented around the year 1600 by Peter Chamberlen in England. The 'slack' cervix in premature labour was noted soon after; the principles of the Ventouse were first established in 1706; and the distinction between accidental antepartum haemorrhage (abruption) and inevitable haemorrhage from placenta praevia was recognised in 1775 in Norwich.

Caesarean section is almost certainly one of the oldest operations in surgery. It was performed prior to the year 1500 as a postmortem procedure to try to save the child. Some women survived during the 17th century when caesarean section was done, usually with a razor, and there are records of 131 caesarean sections being done in England between 1737 and 1878; 23 women survived. In the year 1870, the death rate was in the region of 80 per cent because the uterus was not sutured and the best results after that occurred when the caesarean section was followed by a sub-total hysterectomy. The transverse lower segment incision was first described in 1882 in Berlin. There is doubt about the word caesarean. The most plausible explanation is that it was a rule of the early emperors, the caesars, who succeeded the kings of Rome, one of whom, Numa Pompilius, in 715 BC made a law that forbade the burial of a pregnant woman until the child had been removed from the abdomen in order that the child and mother might be buried separately. Goodness knows what those poor women would think about today's festive occasions, birth booked at a convenient time bypassing labour, painless under a regional block in surroundings like a hotel.

The effect of oxytocin on a woman's uterus was described in 1808, but it was another 130 years before a preparation was produced that would effectively treat haemorrhage. Haemorrhage, sepsis, pulmonary embolism, criminal abortions and eclampsia were the main reasons for maternal mortality, which was recorded as 4.8 per 1000 births in the United Kingdom at the beginning of the 20th century. A new era in obstetrics began in the 1850s when Sir James Young Simpson, professor of midwifery in Edinburgh, used chloroform to relieve the pain of childbirth. This was followed by the work of people like Joseph Lister, Ignaz Semmelweis and Louis Pasteur, who were responsible for the great reduction in deaths due to infection.

It was another of the Peter Chamberlens (there were three of them around the same time) who was the first to suggest the creation of an incorporation of midwives 400 years ago. Midwives were men and women at the time and precursors of obstetricians, the words meaning watch and wait or stand before and the titles were interchangeable until recently.

Formal antenatal care in the western world had its beginnings in 1901, including advice on diet, social conditions and physical and psychological wellbeing, as well as developing into a branch of therapeutic and preventative medicine throughout the world. Improvement in the general health of women led to a century of major advances in the understanding of the physiology and pathology of procreation, with dramatic reductions in maternal and perinatal mortality in developed countries.

Improvement in general health, housing and water was complemented by oxytocics, antibiotics, safer anaesthesia, abortion, blood transfusion and lower segment caesarean section. Local contributions include putting science into the understanding of rhesus disease and the use of corticosteroids antenatally where premature labour threatens. Sedatives, anti-hypertensives, iron supplements, insulin and anti-convulsants are just a few of the agents that have reduced mortality and morbidity. The publication in 1989 of the first guide to effective care in pregnancy and childbirth followed a review of 'over 60 key journals from the 1950 issues onwards' leading to the concept of evidence-based medicine.

The science of pharmacology has had a profound effect on obstetrics, including the oral contraceptive, which arrived in this part of the world in the early 1960s, raising great expectations, although the human limitations of science are apparent as fewer than 50 per cent of pregnancies are actually planned.

Ultrasound has meant an astonishing amount of information is available to pregnant women and the ultrasound scan sometimes seems to have supplanted the clinical skills of taking a history by talking to women and then doing a physical examination. In 1972 in London, I saw the early, grainy images of pregnancy ultrasound that Professor Ian Donald had been perfecting during the previous decade, initially measurements in one dimension of the biparietal diameter and in the following decade, the perfection of the two-dimensional B scan. Since then, there has been an enormous technological leap to four-dimensional pictures for a personal disc of the fetus and measurement of liquor volumes to amniotic fluid to two decimal places. All of the information that is available comes with some that is unwanted.

How much further can science go? We need to know more about the onset of labour and there is still a lot that we do not know. However, the application of ultrasound begs the question of what to do with all of the information that we have at our disposal now and how best to apply the remedies, which comes back to the art of obstetrics. It is time to alter the balance again.

Uncertainty is a constant feature of all medicine, particularly obstetrics. Pregnancy is a natural event of course, as our midwifery colleagues remind us when we are too interventional. Sadly,

nature can be cruel. The unexpected occurs with perinatal loss and life-threatening conditions for women so, still, there are many dilemmas and enigmas. Childbirth has become a natural event for fewer women despite our best efforts and the number of standard primigravidae in the Robson classification is declining.

We know a lot about diabetes mellitus for which treatment is both available and effective, but we seem powerless to halt the 'tsunami' of obesity. Gluttony and sloth are all around us, adding complexity and morbidity to the pregnancies of women in increasing numbers.

Smaller families add to the pressure for perfect babies, reducing tolerance to risks to an unreasonable extent sometimes; the gap between expectation and reality seems to be widening. There is the whole new industry of support and complaints, requiring honesty and compassion, which are part of the art of counselling in times of tragedy. Other recent developments include the management of health services, which in times of budgetary restraint is an art, sometimes resembling a circus. However, doctors have an ethical duty to use limited resources wisely, which has the potential to give rise to conflict. Epidemiology comes between science and art, helping us to understand information and put it into practice. Also, the development of medical colleges during the past century has facilitated the spread of information, research has been supported by governments and the development of a subspecialty of maternal-fetal medicine has been beneficial.

Clearly, advances in perinatal care have been amazing. They have enabled us to intervene earlier and to reduce the perinatal mortality to single figures. The perinatal mortality rate was first introduced in 1930; it was 63 per 1000 births in that year in England and Wales, mainly from prematurity, asphyxia, congenital abnormalities, birth injuries and infection. Despite achievements in the care of the newborn, there will always be some perinatal loss, mostly unavoidable and unexpected. Nature produces oddities in offspring which Charles Darwin, in *The Origin of the Species*, published 150 years ago, refers to as 'monstrosities', a word which illustrates the change in attitude and language since then.

Information about complaints reveals that female obstetricians are less likely to be complained about than men. There are many factors involved, but undoubtedly the art of communication, especially listening and choice of words, is the attribute that is essential to good care, as well as reducing the likelihood of complaint, litigation and disciplinary action. Unfortunately, there has been a rise in defensive medicine and too much intervention in the forlorn hope of eliminating all risk. Additional skills are needed to communicate well with women who, generally, are not sick when they are pregnant and to work collaboratively with other professional people, particularly midwives, who contribute so much to women's health.

Basic sciences are essential for knowledge of obstetrics. Scientific achievements have contributed to safer childbirth, but the words of Montaigne, who lived from 1533 to 1592, are pertinent: 'The practice of the physician is an art, a craft, a skill, a vocation for which examination papers never have been and never can be set'.

Obstetrics has inspired a lot of art – paintings, music, poetry and literature – glorifying pregnant women and newborn babies and commemorating the losses. It represents the best and worst of life, still fundamentally a human activity, a special time for women and their families and a wonderful specialty for doctors. Ultimately, it involves the art of communication, the interpretation of scientific facts for the benefit of individual women and mindfulness at all times.



SPECIALIST OBSTETRICIAN AND GYNAECOLOGIST

Canberra Hospital Department of Obstetrics and Gynaecology

The Department of Obstetrics and Gynaecology at Canberra Hospital provides tertiary level obstetrics and gynaecological services to the ACT and surrounding regions. Canberra Hospital has more than 2500 births per year and is a principal referral centre for high risk pregnancies for the region.

It is the only tertiary care perinatal unit between Sydney and Melbourne and has a busy Fetal Medicine Unit. Canberra Hospital's Centre for Newborn Care has 650 admissions per year with eight intensive care beds, soon to be increased to 10.

The Department provides gynaecological services to the same region and with support for gynaecological oncology from Royal Women's Hospital Randwick. The department has a well supported RANZCOG training programme with a Senior Registrar and 9 registrars including those rotated to other metropolitan and rural rotations.

There is a very active junior doctor programme which is producing excellent quality trainees interested in continuing in Obstetrics and Gynaecology. Involvement in departmental teaching and research is recommended and highly encouraged and supported. There is a strong commitment to quality and audit.

The Canberra Hospital is a teaching hospital of the Australian National University (ANU) Medical School and an academic title at a level commensurate with qualifications and experience will be available to the successful applicant. ANU is one of the world's foremost research universities. Distinguished by its relentless pursuit of excellence, ANU attracts leading academics and outstanding students from Australia and around the world. The ANU campus is only a short drive from Canberra Hospital and offers a great range of research opportunities.

Plans are underway for expansion and refurbishment of the building with \$90 million committed to the new Women and Children's Hospital Centre of Excellence at Canberra Hospital.

Qualifications/Other requirements: Registration as a medical specialist practitioner in the ACT. FRANZCOG or an equivalent higher specialist qualification accepted by the Royal Australian and New Zealand College of Obstetricians and Gynaecologists. "Higher Medical Qualifications" means medical qualifications obtained by an officer subsequent to graduation in medicine which are required by the National Specialist Advisory Committee or such other postgraduate qualification which the ACT Health Service may from time to time choose to recognize for this purpose.

Contact Officer

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**Please note: No recruitment agency
applicants for this position**