PERINATAL LESSONS FROM THE PAST

Hippocrates (460-c 356 BC) and the founding of perinatal medicine

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Knowledge of the life of Hippocrates is mainly based on tradition and on biographies written many centuries after his death. It appears that he was born in 460 BC on the island of Cos, near the western coast of Asia Minor to a physician Heraclides and his wife Phaenarete. Except that he was of short stature, we have to rely on later Roman sculptures for an idea as to his appearance. He was taught medicine by his father who is said to have traced his ancestry back to Asclepius. After his father's death Hippocrates moved to Athens to study with the sophist Gorgias and the philosopher Democritus. Athens was then the cultural centre of the Greek city states and his contemporaries included Socrates, Plato, Pericles, Euripides, Sophocles, Phidias, and Aristotle. After completing his training Hippocrates travelled widely as an itinerant physician visiting Thrace, Thessaly, Delos and many parts of Greece, and became famous for his predictions, cures, and teaching. Subsequently Athens honoured him for his part in checking the great plague that broke out in 430 BC and, also, for declining an invitation from Artaxerxes, Great King of Persia, to become his court physician. Eventually, Hippocrates returned to Cos, the most renowned doctor of his day. He is said to have died in Thessaly at a great age and to be buried between Gyrton and Larissa.¹

During his lifetime the medical school on Cos had become the most famous in Greece and, after his death, his sons Thessalus and Dracon and numerous disciples continued to practice the art he had taught them. However, later in the 4th century Alexandria took over the lead in Greek medicine and the Hippocratic collection of some 72 books and 59 treatises was transferred there. Written in the Ionic dialect in an assortment of styles, it is not possible to say which were written by Hippocrates, though Francis Adams, a country physician from the village of Banchory in Scotland, attempted to do so in 1849.²

Hippocrates has deservedly been called the Father of Medicine. He raised a craft based on superstition and linked with the priesthood to a noble professional art and science that relied on clinical observation and experience. He taught that the physician's primary duty was to his patient and developed ethical standards, encapsulated in the Hippocratic oath, that have never been superseded. Wisdom, humility, and love of humanity shine through his writings. He

Hippocrates, the Father of Medicine.

believed in helping nature to bring about a cure and above all that 'whenever a doctor cannot do good, he must be kept from doing harm'. His teachings survived the Arab conquest of Egypt and eventually returned to Europe through the University of Salerno in the 11th century. From the Renaissance onwards his philosophy and practical approach steadily gained ground until today it forms the basis of modern clinical medicine. The following short extracts give a flavour of his teachings:

'In medicine one must pay attention not to plausible theorizing but to experience and reason together ... I agree that theorizing is to be approved, provided that it is based on facts, and systematically makes its deductions from what is observed ... But conclusions drawn from unaided reason can hardly be serviceable; only those drawn from observed fact'.

'A great part, I believe, of the Art is to be able to observe. Leave nothing to chance, overlook nothing; combine contradictory

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observations and allow yourself enough time’.

‘What escapes the eyesight is mastered by the eye of the mind’.

‘The physician must not only be prepared to do what is right himself, but also to make the patient, the attendants, and externals co-operate’.

‘When a physician is uncertain as to the condition of a patient and is disturbed by the novelty of an affection that he has never seen before, he should never be ashamed to call other physicians to examine the patient with him’.

‘An important phase of medicine is the ability to appraise the literature correctly’.

‘Our natures are the real physician of our diseases’.

In respect to childbirth, Hippocrates believed that the fetus broke his mother’s membranes and brought about his own delivery, adding ‘if the nourishment coming from the mother is faulty, this is a cause of premature labour’. He appreciated that the vertex presentation was normal and advocated cephalic version for malpresentation. Delivery took place with the mother kneeling or on a stool. When there was difficulty with the third stage he advised³:

‘If the secundines come not away easily, the child must be left hanging to them, and the woman seated on a high stool, that the foetus by its weight may pull them along; and lest this should be too suddenly effected, the child may be laid on wool newly plucked, or on two bladders filled with water, and covered with wool, which being pricked, as the water evacuates they will subside, and the child sinking gradually, will gently draw the secundines away’.

His advice on management of the umbilical cord when there were resuscitation problems is also of interest:

‘If the woman has had a difficult labour, and cannot be delivered without the help of machines, the child is generally weak, and therefore the navel-string ought not to be divided until it shall have either urined, sneezed, or cried aloud; in the meantime, it must be kept very near the mother: for though the child does not seem to breathe at first, nor to give any other signs of life, the navel-string, by remaining uncut, may be in a little time inflated, and the life of the infant saved’.

Hippocrates was also the first to describe puerperal sepsis, writing: ‘Erysipelas attacking the internal surface of the pregnant uterus is destructive’. Concerning the baby, he wrote: ‘The diseases of newborn infants are aphthae,

vomiting, insomnia, night fears, inflammation of the umbilicus, and discharge from the ears’. His description of the aetiology, diagnosis, and management of congenital postural deformities such as dislocation of the hips and clubfeet was not bettered until recent times as the following extracts demonstrate:

‘... infants become crippled in the following way; when in the womb there is a narrowness at the part where in fact the crippling is produced, it is inevitable that the body moving in a narrow place shall be crippled in that part. It is thus that trees which in the earth have not enough space, and are hindered by a stone or other thing, become bent during growth, or rather become large in one part and small in another. The infant experiences the same thing when, in the womb, a portion is relatively too narrow for the corresponding part of the infant’.

‘There are persons who, from birth or from disease, have dislocations outwards of both the thighs ... in walking they totter equally to this side and that. Their nates appear very prominent, from the displacement of the bones of the joint ... If, then, the dislocated limb be not reduced, the bone of the thigh becomes shortened ...’.

‘Most cases of congenital clubfoot are remediable, unless the declination be very great ... The best plan then is to treat such cases at as early a period as possible, before the deficiency of the bones of the foot is very great, and before there is any great wasting of the flesh of the leg. There is more than one variety of clubfoot, the most of them being not complete dislocations, but impairments connected with the habitual maintenance of the limb in a certain position ... In a word, as if moulding a wax model, you must bring to their natural position the parts which were abnormally displaced and contracted together, so rectifying them with your hands, and with the bandaging in like manner, as to bring them into their position, not by force but gently ... This, then, is the mode of cure, and it neither requires cutting, burning, nor any other complex means, for such cases yield sooner to treatment than one would believe. However, they are to be fairly mastered only by time, and not until the body has grown up in the natural shape’.

At the end of the day the wisdom of Hippocrates was clothed in humility. As he wrote: ‘Life is short, and the Art long; the occasion fleeting; experience fallacious, and judgment difficult’.

1 Sigerist HE. *A history of medicine. Vol 2: Early Greek, Hindu and Persian medicine.* Oxford: Oxford University Press, 1961.

2 Adams. *The genuine works of Hippocrates.* London: Printed for the Sydenham Society, 1849.

3 Smellie W. In: McClintock AH, ed. *A treatise of midwifery.* Vol 1. London: New Sydenham Society, 1876: 29–36.