

## PERINATAL LESSONS FROM THE PAST

## Soranus of Ephesus (circa AD 98–138) and perinatal care in Roman times

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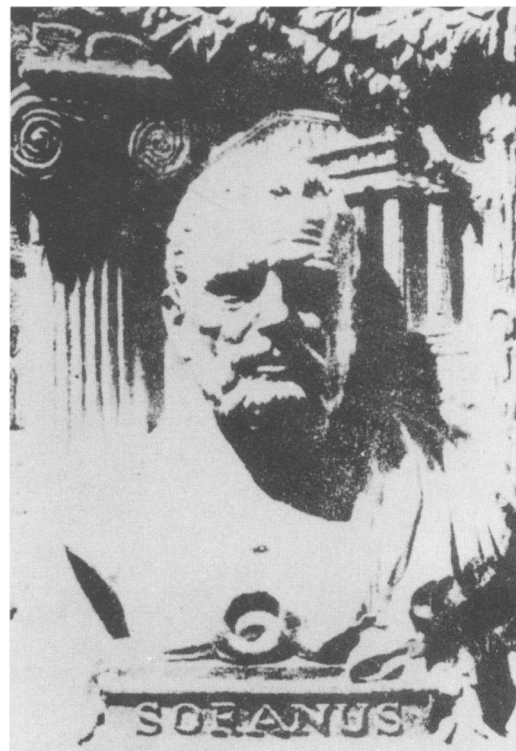
Soranus was undoubtedly one of the most learned doctors of classical times. He was born in Ephesus on the coast of Asia Minor towards the end of the first century AD, the son of Menandrus and his wife Phoebe. Little is known of his life other than that he trained in the famous medical school of Alexandria and practised in Rome during the rules of Trajan and Hadrian. At that time most physicians were from Greece and Soranus quickly became established in practice. He belonged to the Methodist school of Asclepiades, which relied on the Hippocratic doctrine. Like Hippocrates he emphasised the importance of collecting facts, of accurate observation, of the healing virtues inherent in nature, and of considering what was in the best interests of the patient.

Over 20 works have been ascribed to him, including those on acute and chronic disease, fractures, surgery and embryology. He also wrote a *Life of Hippocrates*. His most important work, though, was *Gynecology*, which, after being reconstructed from the original Greek by the philologists Rose and Ilberg in 1927, was translated into English by Tempkin in 1956.<sup>1</sup> It represents the body of obstetric knowledge existing in the second century AD, sifted and enlarged by Soranus, and is the most complete account of gynaecology, midwifery, and paediatrics in classical times. It survived through the centuries, being translated into Latin, Arabic, German, French and English. Many ancient writers plagiarised his writings, including Oribasius, Aetius of Amida, Paul of Aegina, and Moschion. Even 1500 years later the works of Rosslyn and Raynalde in the sixteenth century were largely derived from this source.

*Gynecology* contains many remarkable contributions that might have been written today.

**On the ethics of birth control:**

'A contraceptive differs from an abortive, for the first does not let conception take place, while the latter destroys what has been conceived... But a controversy has arisen. For one party banishes abortives, citing the testimony of Hippocrates who says: "I will give to no one an abortive"; moreover, because it is the specific task of medicine to guard and preserve what has been engendered by nature. The other party prescribes abortives, but with discrimination, that is, they do not prescribe them when a person wishes to



Soranus of Ephesus.

destroy the embryo because of adultery or out of consideration for youthful beauty; but only to prevent subsequent danger in parturition if the uterus is small and not capable of accommodating the complete development, or if the uterus at its orifice has knobby swellings and fissures, or if some similar difficulty is involved.'

There are splendid sections on the optimum maternal age for conception, on the signs of pregnancy and on antenatal care, of which the following are examples.

**On activity during pregnancy:**

'At the seventh month she should give up the more violent movements... For being pulled about is dangerous in the beginning, when the seed is not yet attached ... and on the other hand later, (because) the perfected fetus is a heavy burden. At this time one must take care less the chorion burst on account of too much tossing, and the fluid accumulated in it be evacuated and the fetus, drawn down in dry pregnancy, be

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endangered together with the gravida. Sexual intercourse is always harmful to pregnant women... And even more so in the last months, lest because of it the chorian burst and the fluid which has been prepared for use in parturition be evacuated before the proper time.'

#### **On antenatal care:**

'Even if a woman transgress some or all of the rules mentioned and yet miscarriage of the fetus does not take place, let no one therefore assume that the fetus has not been injured at all. For it has been harmed: it is weakened, becomes retarded in growth, less well nourished, and, in general, more easily injured and susceptible to harmful agents; it becomes misshapen...'

Soranus recommended that labour and delivery be conducted in an upright posture sitting on a stool from which a crescent-shaped cavity had been cut; the reclining posture was to be avoided as it might hinder the descent of the fetus.

#### **On the midwife's duty during labour:**

'... the midwife, after having covered herself properly with an apron above and below, should sit down opposite and below the labouring woman; for the extraction of the fetus must take place from a higher towards a lower plane. Furthermore it is proper that the face of the gravida should be visible to the midwife who shall allay her anxiety, assuring her that there is nothing to fear and that delivery will be easy... The midwife should beware of fixing her gaze steadfastly on the genitals of the labouring woman, lest being ashamed, her body become contracted...'

Soranus's account of the causes of difficult labour is truly magnificent. It embraces maternal (physical and psychological) causes as well as those due to the fetus. The importance of the lubricating action of the amniotic fluid is discussed as well as the difficulties arising from a full bladder or rectum. His account of internal version in the management of malpresentation or multiple pregnancy is likewise a classic, as is his description of puerperal sepsis.

#### **On inflammation of the uterus:**

'The general signs which appear are the following: fever, furthermore pain and pulsation of the affected part, swelling and (rigidity), heat and dryness of the abdomen, tense feeling in the hips or heaviness in the loins, flanks, lower abdomen, groins, and thighs, spells of shivering, a stabbing sensation, numbness of the feet and coldness of the knees, profuse perspiration, a small and very rapid pulse, sympathetic affection of the stomach, fainting, and weakness... If the inflammation becomes worse, fever and swelling of the abdomen increase, delirium sets in as well as gnashing of the teeth (and) convulsions.'

Following delivery there is much advice on infant care, of which the following three sections are examples.

#### **On chilling following childbirth:**

'After omphalotomy, the majority of the barbarians ... put the newborn into cold water in order to make it firm and to let die, as not worth rearing, one that cannot bear the chilling... We however, reject all of these. For cold, on account of its strong and sudden condensing action the like of which the child has not experienced, harms all; and though the harm resulting from the cold escapes notice in those more resistant it is, on the other hand, demonstrated by those susceptible to disease when they are seized by convulsions and apoplexies ... if there is any need of cooling, the cooling effect of the air will be sufficient, on account of which the newborn immediately cries since it is affected by the unaccustomed cold, having just come forth from the warm and enfolded uterus.'

#### **On crying:**

'... one (must) not always give the child (the) breast because it cries. First, since sometimes crying does it good. For it is a natural exercise to strengthen the breath and the respiratory organs... But one should not let it cry too long ... the newborn does not only cry because of hunger, but also because of an uncomfortable position from constriction or pressure ... or because of a sting, or a large amount of food burdening the body, or because of cold, or (heat, or) because it cannot move its bowels since too hard a faecal mass lies in the intestines, or because of some other discomfort or disease. Each of these points can be determined within limits so that one may act according to the trouble...'

#### **On deformation with early weight bearing:**

'For if (the infant) is eager to sit up too early and for too long a period it usually becomes hunchbacked (the spine bending because the little body has as yet no strength). If, moreover, it is too prone to stand up and desirous of walking, the legs may become distorted in the region of the thighs. This is observed to happen particularly in Rome... (Now) if nobody looks after the movements of the infant the limbs of the majority become distorted, as the whole weight of the body rests on the legs ... then of necessity the limbs give in a little, since the bones have not yet become strong.'

Many consider this extract to be the first recorded account of infantile rickets, a condition which was to have a profound effect on childbirth in future times.

1 Soranus. *Gynecology*. Translated by O Temkin. The Johns Hopkins Press, Baltimore, 1956.