

- 2 Payne JP, Severinghaus JW, eds. *Pulse oximetry*. Berlin: Springer-Verlag, 1986.
- 3 Severinghaus JW, Bradley AF. Electrodes for blood PO₂ and PCO₂ determination. *J Appl Physiol* 1958;13:515–20.
- 4 Yamanaka MK, Sue DY. Comparison of arterial end-tidal PCO₂ difference and dead space/tidal volume ratio in respiratory failure. *Chest* 1987;92:832–5.
- 5 Beran AV, Huxtable RF, Black KS, Shigezawa GY, Yeung HN. Investigation of transcutaneous O₂-CO₂ sensors and their application on human adults and newborns. In: Huch A, Huch R, Lucey J, eds. *Continuous transcutaneous blood gas monitoring*. New York: Liss, 1979:421–32.
- 6 Mahutte CK, Michiels TM, Hassell KT, Trueblood DM. Evaluation of a single transcutaneous PO₂-PCO₂ sensor in adult patients. *Crit Care Med* 1984;12:1063–6.
- 7 Bland MJ, Altman DG. Statistical methods for assessing agreement between two methods of clinical measurement. *Lancet* 1986;i:306–10.
- 8 McKelvie RS, Jones NL. Cardiopulmonary exercise testing. *Clin Chest Med* 1989;10:277–91.
- 9 Bedford RF, Wollman H. Complications of percutaneous radial artery cannulation: an objective prospective study in man. *Anesthesiology* 1973;38:228–36.
- 10 Hughes JA, Gray BJ, Hutchison DCS. Changes in transcutaneous oxygen tension during exercise in pulmonary emphysema. *Thorax* 1984;39:424–31.
- 11 Scheid P, Piiper J. Blood/gas equilibrium of carbon dioxide in lungs: a critical review. *Respir Physiol* 1980;39:1–31.

Adventitia

Origin of the word “asthma”

Most of our old medical words come originally from Greek since Roman medicine is essentially Greek medicine at Rome. When there is a choice we more frequently use the Greek alternative—for example *hepar* for liver, not the Latin *jecur*.

In modern medical texts the word “asthma” is rightly said to be derived from the identical Greek word, but meaning “wheezing”, which I don’t think it does. (Greek words here will be transliterated into approximately equivalent English letters.) Asthma is a very old word. Homer uses it twice in a famous passage. In the *Iliad* Book 14 Hector has come up against the greater (Telamonian) Ajax, cast his spear with no effect, and is trying to withdraw. Ajax, the giant, throws a huge boulder and strikes Hector on the chest just below the neck (sternomanubrial junction?), spinning him round like a top. Hector collapses and the narrative moves on until Book 15 where it states: “*ho d’ argaleoi echet’ asthmatihaim’ emeon*”. He was “gripped by (*echeto*) difficult (*argaleoi*) asthma, vomiting up (*emeon*) blood (*haima*).”

To distinguish between haematemesis and haemoptysis from the history was apparently as difficult for Homer as it can be for us now. The second passage in the same book refers to his recovery, when the “*asthma kai hidros*”—“asthma and sweating”—ceased.

The verb that is cognate with *asthma* is *asthmaino* which appears, for example, in Book 10. Odysseus and Diomedes are chasing the Trojan, Dolon, on foot at speed over a long distance. Diomedes throws a spear over Dolon’s shoulder. It sticks in the ground in front of him and stops him in his tracks. The two pursuers come up “*asthmaintonte*”. What follows is horrid. I refuse to believe that this is the first description of exercise-induced asthma.

We must go on to Hippocrates (whoever he was—probably several people) to find *asthma* in one of his or their Aphorisms. The first (1,1) is the one about art being long, life short, usually quoted in Latin translation and just visible in the arms of the London Royal

College of Physicians. In 3,22 he includes asthma, in the plural, in a list of diseases which occur in summer, which is interesting, but it is sandwiched between angina and ileus which spoils the impact. In the Hippocratic corpus the word is used to mean accelerated difficult breathing or shortness of breath, definitely a clinical symptom. (I am grateful to Dr Peter Jones of the Department of Classics, Newcastle, for advice on this and other points.)

We have to go a long way on to find *asthmatikos*, asthmatic, probably to Herodotus Medicus (1st century AD) quoted by Oribasius (4th century AD). Oribasius was physician to Julian the Apostate who tried to reintroduce to Rome the worship of the Olympian gods and sent him off to sound out the long silent Oracle at Delphi which (who?) replied, in still passable hexameters, that unfortunately the old firm was no longer in practice at the address stated.

Perhaps it would be better to go backwards and see if we can find the *ur*-word from which *asthma* derives. I would like it to be *ao*—“blow”—for which one could make a case. It is composed of alpha and omega, the beginning and the end, and would briefly symbolise the supreme importance of our specialty of thoracic medicine, a badly needed gesture. I think I shall have to settle for *awo*, however, where “w” is the Greek digamma, a letter which disappeared from the alphabet about the time Homer’s text was being written down, equivalent to Latin “v” and pronounced as English “w”. Better perhaps is *awemi*, also “blow”. From that comes eventually the Latin *ventus* and our English “wind”. You may feel that the linguistic connection between “asthma” and “wind” is not immediately apparent, but there it is.

In short, *asthma* did not originally mean “wheeze” but rather “noisy breathing”, “making a blowing noise”, “panting”, or even “groaning”.

KB SAUNDERS