Volume 2 Issue 6, November 2001

A Brief History of Medicine in the Middle Ages The Hippocratic Oath – Caristiona nic Beathain

“I swear by the Apollo the healer, by Aesculapius, by Health and all the powers of healing, and call to witness all the gods and goddesses that I may keep this Oath and Promise to the best of my ability and judgement.

I will pay the same respect to my master in the Science as to my parents and share my life with him and pay all my debts to him. I will regard his sons as my brothers and teach them the Science, if they desire to learn it, without fee or contract. I will hand on precepts, lectures and all other learning to my sons, to those of my master and to those pupils duly apprenticed and sworn, and to none other.

I will use my power to help the sick to the best of my ability and judgement; I will abstain from harming or wronging any man by it.

I will not give a fatal draught to anyone if I am asked, nor will I suggest any such thing. Neither will I give a woman means to procure an abortion.

I will be chaste and religious in my life and in my practise.

I will not cut, even for the stone, but I will leave such procedures to the practitioners of that craft.

Whenever I go into a house, I will go to help the sick and never with the intention of doing harm or injury. I will not abuse my position to indulge in sexual contacts with the bodies of women or of men, whether they be freemen or slaves.

Whatever I see or hear, professionally or privately, which ought not to be divulged, I will keep secret and tell no one.

If, therefore, I observe this Oath and do not violate it, may I prosper both in my life and my profession, earning good repute among all men for all time. If I transgress and forswear this Oath, may my lot be otherwise”[1].

Before the Roman conquest medicine in Britain was based upon religion. The druidic priest healers of their time used many of the herbs that grew in abundance in local areas. Druidic healing was centred around the worship of springs and wells, and of trees. The trees represented the masculine aspect of their religion and the pools the feminine [2]. In sixth century Wales a school was founded to teach some of the knowledge that the druidic healers had acquired. This was the Myddfai School. Myddfai medicine focused on diet and the comfort of the patient, also on the quality of the water used in any herbal preparations [3].

As Christianity gradually expanded throughout Europe and Britain changes in medical practice developed. The principle medical practitioners of this time were wise women and members of the monasteries. Medicine encompassed religious prayer and magic incantations [4].Members of the monasteries looked after all members of the community including the sick and the poor. As the

monasteries became renowned for their care of people, their physicians started to get names for themselves as healers. As there reputations increased the monasteries were asked to take in lay people and to teach them the skills of medicine [5]. As the monasteries gained renown for their healing ability, the larger religious centers were sent specific healers.

In 570 AD the pope sent the healers Theodore and Hadrian to Canterbury to help with the care of the sick and poor. On the way to Canterbury they travelled through Gaul collecting medical texts and techniques. Once in England they were instrumental in introducing some of the methods of Greek medicine [6]. The Greek writers most influential at this time in medicine included Aristotle, Hippocrates, Galen, Dioscorides and Pliny [7].

Hippocrates believed in four basic elements; earth, water, air and fire. These four elements derive their properties from four primary qualities; hot, cold, wet and dry. He also believed in maintaining health through exercise, hygiene and healthy food. However, Galen built on the basic idea of the elements and turned them into a rigorous system which defined health and disease and classified all form of disease.

Galen defined “Health” as a state in accordance with nature, which enables the body to function. He also defined “Disease” as an unnatural state of the body which impairs function [8]. The elements form the basic states of the body, these being blood, phlegm, black bile and yellow bile. These humours are balanced in a healthy body, whereas an imbalance causes illness or disease [9]. As well as the basic elements throughout the body, each organ is dominated by different humours according to its function [10]. This understanding of the body was the basis of medical understanding from ancient Greece, up to and during the whole of the Middle Ages and much of the Renaissance.

Prescription of medicines at this time was also dominated by the humours. Herbs were classified according to the intensity of their hot, dry, warm and cold qualities. The intensities were categorised according to their degree of effect. For example,

- Giving imperceptible effect,
- Giving perceptible effect,
- Giving a strong effect,
- Giving a destructive effect [11].

According to this system, a herb that is Hot in the First degree and Dry in the Third degree, was useful for a slightly cold condition, with a strong wet element to the disease. This was further influenced by the constitution of the client. Depending on the clients own predominance of a particular quality and their age or general strength, a herb may be cold in the first degree to one person and yet effect another as if the herb was cold in the third degree [12].

One of the mainstays of the Galenic system of medicine was the belief that the physician must preserve what is according to nature and eliminate anything that is not [13]. For this reason he believed that if nature was winning the battle and a person was getting well without intervention then the person must be left alone. If, however the person was not getting better then the physicians job was to cure. This cure was effected by eliminating the excessive humours from the body. This resulted in the uses of purges and emetics that became more and more popular as stronger ones were found. The other major way to eliminate excessive humours was by blood-letting. Galen believed that blood-letting was useful in dissipating the inflammation process and thus gradually removing disease [14].

Avicenna was the next person to add substantially to medical thought. Arab medicine at first placed an emphasis on diet and hygiene, much like the early Hippocratic style of medicine. However with the entrance of Avicenna into the medical field this was all about to change. Avicenna claimed that knowledge of astrology was essential to medicine and treatment. He believed that plants were subject to astrological influences and therein lay their power to heal the sick [15].Avicenna further built on the idea of the humours. He believed that disease was an imbalance of temperaments, a bodily malformation or a dissolution on bodily order, and therefore an obstruction. He also believed that disease may arise from bad diet, air or motion, or too much rest, sleep or passion [16]. Within Avicenna's system of medicine, diagnosis was carried out through urine or pulse monitoring. Therapies then included emetics, cathartics, enemas and sedatives, also bleeding, blistering and cauterisation. With the strong codification of medicine used by both Galen and Avicenna the science of medicine was unable to progress. If one part of the system was removed it was expected that a cure could not be performed, thus any failure to heal was taken as an incorrect usage of medical knowledge. Thus any changes in medical thought were actively discouraged [17].

The system of medicine that Galen and Avicenna both created over time was used by both the lay person and the professional physician in the Middle Ages. Lay medicine was often performed according to predetermined tables. Seven or eight pieces of parchment were folded in half and then into three sections per half. Each strip was then devoted to a particular aspect of diagnosis and treatment. One on section would be the date that the illness began, another sections would have the positions of the sun and the moon, also a calendar of the eclipses of the sun and the moon and the rules for phlebotomy and urine analysis. The next sections would put a lot of this theory into useable tables, such as the positions of the planet governing the part of the body that was effected. The last sections included venesection, showing the vein that needed to be cut for effective blood letting, and the twenty-four different kinds of urine and their significance [18].

Professional physicians learnt medicine at a number of different schools and universities through out Europe. The oldest and most respected of these was the school of Salerno. Salernum was founded in the ninth century. It taught both male and female students, which was very unusual for its time [19]. Salerno reached its peak of popularity during the twelfth century. At this time the faculty consisted of ten professors or magistri, plus the students. Students studied for seven years and were required to be at least 21 years old before they could practice medicine. They were also required to pass an exam based on the work on Galen or Avicenna and Hippocrates and Aristotle. Once all of this was done they received the title of MA or physician. If they wanted to become a professor or a surgeon further years of study were required [20]. On entry to the school candidates were also required to swear to be true and obedient to the Society of Physicians and to refuse all fees from the poor, and to have no gains with the apothecaries. The apothecaries were the dispensers of some medicaments and also practised some medicine. Throughout the life of the school of Salerno these requirements were modified and changed to keep up with the requirements of the times [21]. As Salerno's size and influence increased the physicians started to translate many of the Arabic medical texts as well as the ever popular Greek texts. Salerno's popularity attracted students from all over Europe to learn at the school and thus spread both texts and medical knowledge over a wider area then ever before. Salerno was still in existence up until the eighteenth century, however it then closed down because of its outdated facilities [22].

Medical education was beginning to spread to other areas of Europe as well as Italy. Montpellier in the south of France had a fully developed medical faculty by 1137. Other schools gained popularity,

but most of these centred around one “master” and when he died the schools tended to die with them. Oxford did not develop a medical program until 1350. Almost all of the schools at the time relied upon a knowledge of the classics before anyone was allowed to study medicine. This meant that to earn a Masters degree in medicine, enabling someone to practice, students had to study for at least six years [23]. Further study in anatomy was required for a physician to become a surgeon. Much of this study was done in different universities that specialised in surgery. However physicians held the key positions in all of the European universities at this time and a surgeon could not practice without the permission of the College of Physicians [24]. British surgeons were usually not trained in this way, they were instead taught mainly through an apprenticeship. Surgeons also gained experience in treating wounds on the battlefield. Additionally, charms and astrology were still used to influence the recovery of patients [25].

In 1348 the Black Death reached Europe. Europe’s population was reduced by a third from this epidemic. The medical profession had no way to deal with the situation. Purging, bleeding, hygiene, diet, burning of aromatic herbs and consuming special herbs were all tried so as to prevent people from catching the disease. Once a person had the disease, the same treatments were again applied along with poultices, the lancing of buboes and the use of ground gems as a medicine for the rich. However, nothing worked. In the end it was decided that the plague was a visitation of fate and therefore unstoppable with modern medicine [26].

The next form of plague to hit Europe was that of syphilis. It was introduced to Northern Europe by the army of the French King Charles VII, who bought it back from Naples. It caused ulcerous sores, racking pains through the body, and heart and brain damage. This eventually lead to paralysis, dementia and death. Originally the treatment was isolation from friends and family, warmth, exercise, a bland diet and frequent bleeding and purging, with external ointments being used for the ulcers. None of them worked [27]. The treatment of choice was that of mercury [28]. At first neat mercury was used, this caused little or no side effects. However as it was used in ointments the mercury was broken down by the friction used when mixing the ointments causing the mercury salts to become available to the body through the skin. this caused damage to the mucous membranes and teeth. As this treatment for syphilis became more widely known quacks started to use huge amounts of mercury including “corrosive sublimate” a mixture of mercury heated with vitriol and salt. This substance caused agonising cramps and bloody diarrhoea, also suppression of urine, ulcers, and the deterioration of mucous membranes. The most popular treatment consisted of covering all the body, except for the head and heart region, with mercury mixed in grease. The person was then covered in blankets until a full body sweat was induced. The idea was to get the person to salivate. The treatment was used for ten days and it was expected that the person produce a number of pints of saliva every day, to purge the body of the disease. Some of the side effects of this treatment included teeth and gums that became so sensitive that they blackened and fell out. Sores formed on the mouth and jaws causing disfiguration, also tremors and paralysis [29].

Many products were tried in the attempt to deal with syphilis. Guaiacum wood, brought back from the West Indies was boiled and given as a decoction. In the Caribbean it was used as part of a complete treatment including heat, rest, exercise and a specific diet. In Europe people did not generally have the time to follow the treatment as rigorously as the natives of the West Indies so the treatment was unsuccessful and soon fell out of favour [30]. Other herbs also came into favour and just as quickly went out again.

During the time of Henry VIII English medicine had divided into three main groups; physicians, surgeons and apothecaries. These three groups were constantly trying to intrude into each others areas of expertise. As a result of this the College of Physicians tried to get their profession regulated. Henry passed a number of successive acts enabling the apothecaries to supply all medicines and to treat twelve common ailments including; syphilis, renal stones, apoplexy, paralysis, liver disease, cystitis, skin diseases, sciatica, eye diseases, hernia, rheumatism and catarrh. Surgeons were given four executed prisoners annually to perform dissections on and the physicians were able to treat any disease [31]. After the passing of the laws regulating the three main medical areas it was found that the poor were no longer getting adequate treatment. The physicians were only treating paying customers and the apothecaries were no longer able to offer their cheaper services. Thus in 1542 Henry VIII passed what came to be know as the ‘Quacks Charter’. Non-physicians became allowed to treat an illness pertaining to the surface of the body with plasters, poultices and ointments. They were also to give any service needed to those in need. This Charter made it possible for laymen to treat more people than a physician, who were not allowed to treat conditions requiring surgery. Many alterative therapists still practice under this charter today [32].

Finally, during the Renaissance, came a shift in the perception of medicine. Paracelsus started to redefine the systems of medicine. He believed that the elements were formed from atoms that then formed elementary material. These elementary materials were sulphur, mercury and salt; which were then used to generate the four elements of earth, air, fire and water. Disease resulted when a persons elements broke down into their elementary materials. Because everything could be reduced to one of the elementary materials or atoms, it seemed logical that minerals and plants would also have these materials. It followed that an illness could be cured by getting the appropriate elementary material from minerals and plants [33]. Paracelsus followed a philosophy of ‘like cures like’ believing that if a product could cause a disease in great quantity it could also cure it when used in much smaller quantities. He also believed in the ‘Doctrine of Signature’, in which a plant useful for a particular disease would show itself in the look of the plant. This doctrine maintained that a plant would look like the disease or the organ that it was able to cure. He also claimed that it was fraudulent of physicians to cause people to spend so much money on foreign substances for medicine when the herbs in their back yards would often do just as well [34].

Paracelsus is important more because he created the impetus for renewed research into medicine rather than accepting beliefs in how the body worked. With his revolutionary ideas the ancient Greeks finally started to lose their hold on medical theory and for the first time physicians started to look at what they actually saw in the body and not what they were told they must see [35].

References.

1. Ed. Lloyd, G. E. R. Hippocratic Writings. Penguin Classics. London, Great Britain. 1983:67.
2. Maple, E. Magic Medicine and Quackery. Robert Hale. London 1968: 35.
3. Griggs, B. Green Pharmacy: a history of herbal medicine. Mackays of Chatham Ltd. Great Britain. 1987:19-23.
4. opcit, Maple, E. 37.
5. opcit Griggs, B. 20.
6. Talbot, G. H. Medicine in Medieval England. Olbourne London.1967:11.
7. Brain, P. Galen on Bloodletting: a study of the origins, development, and validity of his opinions, with a translation of three other works. Cambridge University Press, Cambridge UK. 1986:4.

8. opcit, Talbot:11.
9. opcit. Lloyd:chap 3-4.
10. Ottosson, P. Scholastic Mecicine and Philosophy. Napoli Bibliopolis.1984:131-134.
11. ibid:135.
12. ibid:136.
13. opcit. Galen:5.
14. ibid:13.
15. opcit. Griggs:25.
16. Goodman, L. Avicenna. Routledge, London. 1992 :33.
17. ibid:36.
18. opcit, Talbot:125-126.
19. Ordronaux J. Code of health of the School of Salernum. JB Lippincott and Co. Philadelphia.
20. 1870:17.
21. ibid: 16-21.
22. ibid:21.
23. ibid:16.
24. opcit. Griggs:27.
25. opcit, Talbot. 118.
26. ibid:120-123.
27. opcit. Griggs:30
28. ibid:30-33.
29. opcit Maple:76.
30. opcit Griggs:33-38.
31. Lane, S. A course of Lectures on Syphilis. The Lancet. Vol. 1. December 18, 1841-42:393.
32. opcit Maple:65.
33. ibid:65-66.
34. Pagel, W. Paracelsus; an introduction to Philosophical Medicine in the era of the Renaissance. Karger, Sydney 1982:129-131.
35. ibid:133-149.
36. opcit Griggs:47-51.

Bibliography

- Brain, P. Galen on Bloodletting: a study of the origins, development, and validity of his opinions, with a translation of three other works. Cambridge University Press, Cambridge UK.
- Lane, S. A course of Lectures on Syphilis. The Lancet. Vol. 1. December 18, 1841-42
- Griggs, B. Green Pharmacy: a history of herbal medicine. Mackays of Chatham Ltd. Great Britain. 1987
- Maple, E. Magic Medicine and Quackery. Robert Hale. London 1968
- Ordronaux J. Code of health of the School of Salernum. JB Lippincott and Co. Philadelphia. 1870
- Ottosson, P. Scholastic Mecicine and Philosophy. Napoli Bibliopolis.1984
- Pagel, W. Paracelsus; an introduction to Philosophical Medicine in the era of the Renaissance.
- Karger, Sydney 1982
- Talbot, G. H. Medicine in Medieval England. Olbourne London.1967

- Ed. Lloyd, G. E. R. Hippocratic Writings. Penguin Classics. London, Great Britain. 1983

Making a Gourd Watering Pot – Sigurd Trygvarsson

This type of watering device may be quite ancient ,it is at least traceable to the 15th C, many examples of similar pots made of pottery have also been unearthed.

- Select a gourd that has a top shaped like a handle ,hold it by this handle, approximately where your thumb sits mark out a circle the size of a 5cent piece. Using a very sharp knife or a drill cut out this hole, once this is done use a stick or a piece of wire to clean out the inside of the gourd, it may help to shake the gourd until the seeds rattle before hand [this will help to loosen up the seeds in the pith]. CAUTION IN MAY BE NECESSARY TO WEAR A FACE MASK WHILE DOING THIS AS DUST FROM THE PITH IS VERY FINE.]
- The next step is to make the holes in the base of the gourd, a drill or sharp knife can be used for this. About 10 holes should be sufficient. Flush out the gourd with water to remove any left over pith.
- To finish off the gourd it may be possible to wax the inside, scraping the outside can also bring out some of the patterns on the gourd; waxing the outside may also help to prevent the gourds skin from becoming water logged .
- To fill the watering pot submerge the whole gourd so that water flows in through all the holes ,then place your thumb over the hole. To use the pot simply take your thumb off the hole.