

Medieval uroscopy and its representation on misericords – Part 1: uroscopy

Henry Connor

ABSTRACT – The art of uroscopy involved the visual inspection of urine in a specially shaped flask called a matula. By the fourteenth century it had become an integral part of the assessment of the patient's humoral balance, which was the linchpin of both diagnosis and management in medieval medical practice, and the matula became the symbol of a physician. However, the practice was open to abuse by unscrupulous physicians, who offered treatment solely on the basis of uroscopy without even seeing the patient. Further abuse occurred as Latin texts on the subject were translated into the vernacular by unqualified imposters. Although more orthodox practitioners and the College of Physicians tried hard to distance themselves from the practice, the matula became a symbol of ridicule.

Inspection of urine was recorded in the clay tablets of Sumerian and Babylonian physicians of 4000 BC¹, and was advocated by Hippocrates (460–355 BC) and by Galen (AD 129–c200) though, as Hoeniger has emphasised, both limited their diagnostic deductions from examinations of the urine to conditions affecting the kidneys, bladder and urethra². Arabian physicians made more ambitious inferences and the practice of uroscopy as a complete system of diagnosis and management reached its apotheosis in the writings of the Salerno school of physicians, which dominated European medieval practice in the eleventh and twelfth centuries³. Of particular importance was the teaching of Gilles de Corbeil (1165–1213), Canon of Paris and Physician to King Philippe-Auguste of France, whose treatise on uroscopy, *Carmina de Urinarum Indiciis* (Songs on Urinary Judgement), was written in verse which made it easily memorisable^{3,4}. It was later printed in Padua (1484) and in Venice (1494)⁵. The practice of uroscopy, as developed by the Salernitan and later physicians, was extremely complex^{3,4,6}. The urine had to be examined in a specially shaped flask, known as a matula or jordan, which was made of glass of a specified quality. Each region of the matula corresponded to a part of the human body. More than twenty different types of urine, each of which could be further subdivided according to colour and sediment, were described. The physician could

recognise these differences, and thereby make a diagnosis, by reference to instructions and charts which were initially in manuscript and later in printed form^{3,4,6,7} (Figure 1). The original texts were in Latin, and therefore only comprehensible to the educated, but from about 1375 there was an explosion of vernacular medical texts written in Medieval English^{7,8}. One of those on uroscopy was probably the work of John Lelamour, a master at the cathedral school in Hereford, who in 1373 had translated a Latin Herbal^{9,10} which also served as one of the earliest English texts on gardening¹¹.

Henry Connor MD
FRCP, Consultant
Physician, County
Hospital, Hereford

Clin Med JRCPL
2001;1:507–9

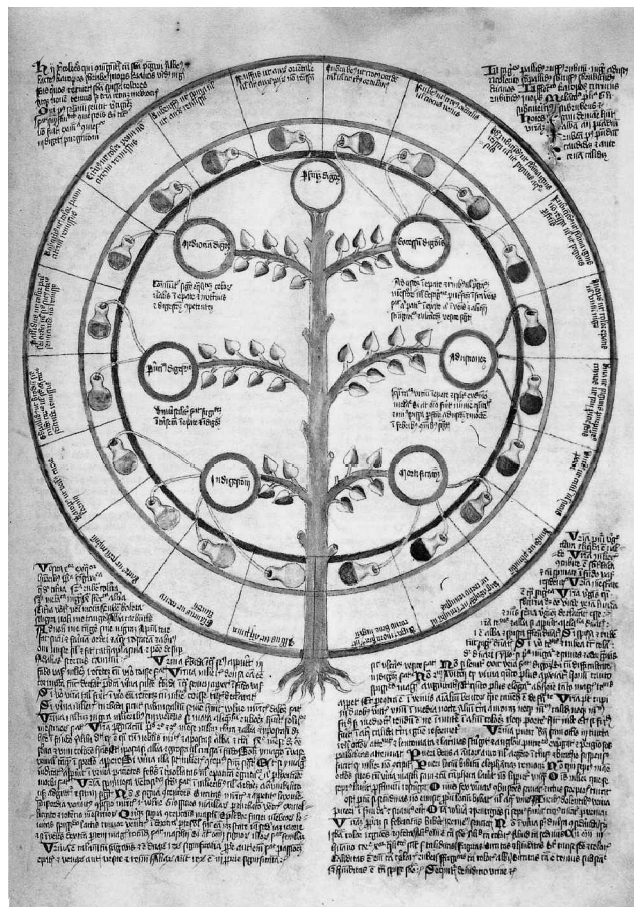


Fig 1. Uroscopy chart, in the form of a tree surrounded by matulas. Apocalypsis S. Johannis. fol. 42r (c1420?).
Reproduced with permission from the Wellcome Institute Library, London.

Despite its complexity, uroscopy became one of the principal methods of diagnosis because it provided the best available means of understanding the patient's 'humoral balance', a concept which underpinned the entire rationale of medieval diagnosis and treatment. It was acceptable to patients because it was painless and also because it was discreet, a matter of great importance to ladies in the Middle Ages⁷. The practice of uroscopy was so prevalent that the matula became firmly fixed in the public mind as the symbol of the physician. It was used as such in paintings, manuscripts, wood engravings and, as described later, on misericords. In some parts of mainland Europe it was used as a sign-board¹², analogous to the barber's red and white pole.

However, the practice of uroscopy was open to abuse by charlatans, and some more orthodox practitioners were also prepared to offer diagnosis and treatment on the basis of seeing only the urine and not the patient. An early caution against this practice had been given by Isaac Judaeus (c880–c932):

The urine is to be studied only with regard to the liver and urinary passages, and this is true only if it is judged in all its conditions. But in our time there are fools who would base prophecies on it, without seeing the patient, and determine what disease is present, and whether the patient will die, and other foolishness¹³.

In an English poem written in about 1327, the author castigates those 'false fisiciens' who will 'wagge his urine in a vessel of glaz'¹⁴, and Thomas Linacre (?1460–1524), the founder and first president of the College of Physicians of London, was said to have ridiculed those who were 'too ready to carry about the patient's urine, expecting they would be told all things from the mere speculation of it', sarcastically suggesting that they bring the patient's shoe instead and 'he would prophesie full as well over that'¹⁵. The story of offering to prophesy over a shoe is also told of John Radcliffe (1650–1714)¹⁶. Paracelsus (1493–1541) considered that uroscopy was based on dogma and introduced a system based on alchemic methods⁴, but such techniques were also favoured by unorthodox practitioners and by 1555 the College of Physicians had forbidden the practice of alchemy¹⁷. By 1601 the revised version of John Caius' original statutes, the *Statuta Vetera*, contained a clause entitled *De Matularum et urinam inspectione*, which was still present in the Statutes of 1647, and which stated that:

It is ridiculous and stupid to attempt to interpret anything definite and certain merely from inspection of the urine and by inference therefrom, whether about the type and nature of the illness, or the state and condition of the sufferer¹⁸,

and, according to the later *Statuta Nova* 'for that reason we desire and decree that neither any Collegiate nor any candidate should, like the sly imposter, use mere inspection of the urine in his consultation'; uroscopy was only to be used as a part of the whole treatment, according to the nature of the illness and its progress, and the cure was to 'be administered as the physician, in consultation, will have prescribed to some honest apothecary in Latin'¹⁹. In the *Statuta Nova* the prohibition on the practice of alchemy was extended to become a ban on associating with

unqualified practitioners: 'No Doctor or Fellow or Candidate or Licentiate may enter an agreement with an Empiric ... under a penalty of ten Pounds'²⁰. However, the College's jurisdiction extended only within the City of London, and outside London (and perhaps even within) doctors continued to practise uroscopy, for which there was evidently a continuing public demand. However, others were more sceptical and used it to ridicule doctors. There are satirical references to uroscopy in at least five plays written by Shakespeare between 1594 and 1605^{21,22}, in Webster's *Duchess of Malfi* (1613)², and in the *Anatomy of Melancholy* (1621) in which Robert Burton wrote 'to be a physician, a piss-pot caster, 'tis loathed'².

Many physicians tried to distance themselves from the public image of physicians as uroscopists and from those doctors and unqualified practitioners who practised uroscopy. In 1637 Thomas Brian published the *Pisse-Prophet or Certain Pisse-Pot Lectures*²³:

wherein are newly discovered the old fallacies, deceit and juggling of the Pisse-Pot Science, used by all those (whether Quacks and Empiricks, or other methodicall Physicians) who pretend knowledge of Diseases, by the Urine, in giving judgement of the same.

Brian warned his lay readers against 'the desperate hazard that they put their lives in, who adventure to take Physicke prescribed only by the sight of the Urine', and urged them to 'Take therefore, (and that in time) such a Physician as is authorised and allowed, either by the Universities, or by the learned College of Physicians of London'. In his *Errours of the People*²⁴, James Primrose noted that physicians in France and Italy had 'quite abandoned this foolish custom', although it still persisted in Germany. Both Primrose and Harris¹⁵ derided uroscopists for deceiving and defrauding the public, and quoted from a number of European physicians in support of their arguments. Thomas Willis (1621–1675), while a young physician struggling to make his way, had frequently flouted the College's statutes on uroscopy which he practised in Abdingdon market, taking a history from a relative without seeing the patient²⁵; but in his successful later years he condemned the practice, writing in his *Diatribae Duae*, published the year after his death, of the 'often false and uncertain conclusions' drawn from visual inspection of the urine (quoted in Haber⁴).

However, the public still continued to consult uroscopists. In 1771 Dr Nash of Bromsgrove advertised in the *Coventry Mercury* 'that he infallibly discovered disease by inspecting the patients urine' and that his 'unbounded success has sufficiently evinced this assertion'²⁶, and in 1778 John Coakley Lettsom (1744–1815) wrote that 'No modern imposters have been more successful than water conjurors, with which this nation still abounds'²⁷. Lettsom's observation was made in the context of the attack by him, and others, on a Mr Myersbach, a German quack, who enjoyed great success with uroscopy in London in the mid 1770s, and of whom Lettsom said: 'Mr Myersbach knew less of urine than a chambermaid, and as little of medicine as most of his patients'²⁸.

As late as 1736, William Hogarth had used the matula as a satirical symbol of the physician in his critical engraving of

London's physicians – *The Company of Undertakers*²⁹ – but, as will be described in the concluding part of this paper, some of the earliest examples of uroscopy being used to lampoon the medical profession are to be found on the carvings on mediaeval misericords.

Acknowledgements

I am grateful to the Wellcome Trust Centre for the History of Medicine for permission to reproduce Figure 1 and to Mr Geoffrey Davenport for advice on the early statutes of the College of Physicians of London.

References

- 1 Anonymous. *The evolution of urine analysis, an historical sketch of the clinical examination of urine*. London: Burroughs Wellcome, 1911.
- 2 Hoeniger FD. *Medicine and Shakespeare in the English Renaissance*. London and Toronto: Associated University Presses, 1992:230–3.
- 3 Canton AD, Castellano M. Theory of urine formation and uroscopic diagnosis in the Medical School of Salerno. *Kidney International* 1988;**34**:273–7.
- 4 Haber MH. Pisse Prophecy: A brief history of urinalysis. *Clin Lab Med* 1988;**8**:415–30.
- 5 Garrison FH. *An introduction to the history of medicine*. Philadelphia and London: WB Saunders, second edition, 1917:134.
- 6 Fine LG. Circle of urine glasses: art of uroscopy. *Am J Nephrol* 1986;**6**:307–11.
- 7 Rawcliffe C. *Medicine and society in later medieval England*. Stroud: Sutton Publishing, 1997:46–52.
- 8 Getz FM. Charity, translation and the language of medical learning in medieval England. *Bull Hist Med* 1990;**64**:1–17.
- 9 Moorat SJ (ed.). *Catalogue of Western manuscripts on medicine and science in the Wellcome Historical Medical Library. Vol 1: MSS written before 1650 AD*. London, 1962:578–9.
- 10 Orme M. The medieval schools of Herefordshire. *Nottingham Medieval Studies* 1966;**40**:47–62.
- 11 Harvey JH. The first English garden book. *Garden History* 1985;**13**: 83–101.
- 12 Garrison FH. *An introduction to the history of medicine*. Philadelphia and London: WB Saunders, second edition, 1917:165–6.
- 13 Jarcho S. Guide for physicians (Muscar Harofim) by Isaac Judaeus – translated from the Hebrew. *Bull Hist Med* 1944;**15**:180–8.
- 14 Wright T (editor and translator). *The political songs of England from the reign of John to that of Edward II*. London: Camden Society, 1834:333.
- 15 Harris W. *Pharmacologica anti-empirica*. London: Richard Chiswell 1683:325–9. Walter Harris (1647–1732) converted from Protestant to Roman Catholic and back again, and was able to serve as physician to both Charles II and William III. In the College of Physicians he was, at various times, Censor, Treasurer, Consiliarius, Harveian Orator and Lumleian Lecturer (Munk W. *The Roll of the Royal College of Physicians of London*, second edition, London, 1878, vol 1:423–4).
- 16 Silvette H. The urine tells all. In: Butler F (ed.), *The doctor on the stage: medicine and medical men in seventeenth century England*. Knoxville: University of Tennessee Press, 1967:7–35.
- 17 *Statuta Collegii Medicorum Londii* 1555. The relevant passage is quoted in Sir George Clark's *A History of the Royal College of Physicians of London*, Oxford: Clarendon Press, 1964: Vol 1, Appendix 1, p384, where he gives the original reference as Bodleian MS. Ashmole 1826.
- 18 The original *Statuta Vetera* did not survive the fire of London in 1666, but copies survive in the manuscripts of Charles Goodall (*RCP MS. 2272/236*) and, with minor differences, of William Munk (*RCP MS. 2012/78*). The relevant passage in the 1647 Statutes, which did survive the fire, is given in Clark (*op cit*) p416.
- 19 Bodleian Library MS. *Rawlinson Statutes* 6, 15863/64.
- 20 Bodleian Library MS. 18037 fol 33v.
- 21 Thomas St C. Shakespeare and medicine. *Trans Med Soc Lond* 1916;**34**:257–325, especially 279–280.
- 22 Simpson RR. *Shakespeare and medicine*. Edinburgh and London: E and S Livingstone, 1959:21–24, 45–46.
- 23 Brian T. *Pisse-prophet or certaine pisse-pot lectures*. London: R Thrale, 1637. Thomas Brian graduated from Cambridge, BA 1624–5, MA 1629 in which year he also obtained his licence from the College of Physicians, practising first in London and then in Colchester where he became a Member of Parliament.
- 24 Primrose J. *Popular Errors or The Errours of the people in matter of Physick*. English translation by Robert Wittie, London: Nicholas Bourne, 1651:64, 91–2. Primrose's original work was published in Latin in 1637 (H Robinson, St Paul's Churchyard, London). He quotes the College's prohibition on associating with uroscopists from the *Statuta Vetera* in almost identical form to that given in references 18 and 19 but with minor differences which may be stylistic or due to transcription errors or possibly because, as Clark has shown (*op cit* pp172–81), the Statutes were revised on a number of occasions. Copies of Primrose's original work, of two Dutch reprints and of Wittie's translation are in the library of the Royal College of Physicians of London. Although Wittie's translation was not published until 1651, he says in his introduction that the work had been completed and with the printer more than eleven years earlier, but that printing had been hindered by 'the Distractions of the times', presumably a reference to the turmoil of the English Civil War. James Prim(e)rose (LRCP 1629, d 1659) was born and studied in France before practising in Hull. Munk's *Roll* lists thirteen of his publications, one of which was an attack on Harvey's description of the circulation, which was published the year after Harvey completed his final terms of office as Censor and Treasurer of the College. Munk quotes from the *Life of Harvey* by Willis who wrote that Primrose's essay 'abounds ... in what may be termed dishonest perversions of simple matters of fact, and in its whole course appeals not once to experimentation as a means of investigation' (Munk's *Roll*, *op cit* in ref 15, pp 197–8). Primrose's attack on uroscopy may therefore have been motivated not simply by a dislike of empiricism and quacks but also by a desire to rehabilitate himself within the College; if so, he appears to have succeeded because the reverse of the title page of *De Vulgi in Medicina Erroribus* gives an endorsement of the work by Simeon Fox, who was President of the College (1634–40) and who describes it as 'wise and worthy'. Robert Wittie, who translated this work by Primrose, also practised in Hull, having been born in Beverley where he was baptised in St Mary's, one of the churches described later as featuring an ape uroscopist on one of its misericords. He was an ardent advocate of the spa waters at Scarborough (Munk's *Roll*, *op cit* in ref 15, pp 413–5).
- 25 Dewhurst K. *Willis's Oxford lectures*. Oxford: Sandford Publications, 1980:9–10.
- 26 Lane J. *The Making of the English patient*. Stroud: Sutton Publishing, 2000:28.
- 27 Lettsom JC. *History of the origin of medicine*. London: E and C Dilly, 1778:153, note (a).
- 28 Abraham JJ. *Lettsom: his life, times, friends and descendants*. London: William Heineman Medical Books, 1933:169–75. Abraham suggests that Lettsom was critical of the College of Physicians which could have suppressed Myersbach's activities, but did not do so because it feared allegations of self-interest and malevolence.
- 29 Hogarth's engraving is also an early example of the use of the gold-headed cane as a symbol of the physician.

Address for correspondence:

Dr Henry Connor, County Hospital,

Hereford HR1 2ER

Email: henry.connor@hh-tr.wmids.nhs.uk