William Harvey and his gout*

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SUMMARY In William Harvey's day almost any or every arthropathy was termed gout. This is evident in the case histories of some of his patients and in his own case, where his own cold water therapy would suggest the correct diagnosis was not gout but erythromelalgia (Weir Mitchell's disease).

William Harvey was born in Folkestone on 1 April 1578. It is generally thought that he suffered greatly from gout in his later years. As a young man at Cambridge he was absent ill on several occasions in 1598 and continuously from 4 July to 27 October 1599, and this was thought by Sir Thomas Barlow¹ in his Harveian oration of 1916 to be due to recurrent gout. But Geoffrey Keynes,² although he accepts the diagnosis of gout later in Harvey's life, considers malaria a much likelier diagnosis in a young man in the malarious fen country of that time. Harvey himself comments on an abdominal tumour when he had a 'quartan ague' which could well have been a malarial splenomegaly but he makes no reference to pains in his feet. Peruvian cinchona bark was not imported into England until 1639, but with Harvey's views on therapy he might not have used it even if it had been available.

But what evidence is there that Harvey did have gout? Aubrey states he was much and often affected by it but does not describe his symptoms, and Harvey himself makes no reference to it. He treated several patients for it, and it is possible that he was called in to see Sir Francis Bacon when, as John Chamberlain says in a letter dated 24 May 1617 of this great man, 'His infirmities is given out to be the goute, and the greatest harme or sense he hath of it is in his heele, and sometimes he takes pleasure to flout and play with his disease, which he says hath chaunged the old covetous course and is become ambitious, for never beggar had the goute but he'. Whatever disorder Bacon had, the heel is very unlikely as a site of acute gout. Bacon had his own ideas as to its treatment, which he claimed was usually successful within 24 hours. First he applied a poultice, then a bath or

fomentation, then a plaster, and he instructed the physicians he called in as to this mode of treatment, which probably did not endear him to them greatly. He does not refer to Harvey and in general was highly critical of the medicine of his times and those practising it.

Flitting polyarthritis

Another patient of Harvey, Sir John Bramston the younger, recorded that in the year 1637, one year after his marriage, he felt a pain in one ankle, which spread to other joints. 'Whereupon Mr Vuies, a physician, a Dutchman dwelling at Chelmsford, was sent for; who comeinge immediately, let me blood and soon after purged me and swet me. But my pains continuinge, and removinge from joint to joint, my father would have a physitian sent for from London; and Dr Spicer came . . . purged me and swet me, and stayed four or five days here, and then left me weake and in pain still. But, by God's mercie, after a month or six weeks I was rid of my paines and I came abroad againe'.

Whether this flitting polyarthritis was gout is highly debatable, and he remained symptom free until 15 years later, when again he experienced a polyarthritis affecting hip, ankles, and knees which 'rann over every joint of my bodie, even my neck'. The same treatment as before was given, but his condition worsened. 'My joints were so benumbed and enfeebled that I could not for a long time after goe without leadeinge, not could I open or shutt one hand without the help of the other, so that many thought I should be a crible duringe the remainder of my life'. Some advised him to go for treatment to Bath, some advised against it, so 'I went to Dr Harvey, then newly come from Oxford, and askt his opinion'. Harvey wisely advised him to avoid wine and strong drink, to eat only once a day and then only sparingly. This advice, as is usual to this day, was poorly received, and Bramston continues, 'So I left him and

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went to Sir William Palmer and Mr Coppin, with my brother Robert Abdy, unto the Fleece in Cornewell (Cornhill); who inquiring what Dr Harvey said, I told them and Mr Coppin replied, Dr Harvey hath starved himselfe these twentie years, neither eating nor drinking, but as he hath directed you and yet he hath the gout. To which I returned, if to fast and have gout be all one with eat and have the gout I will doe as I have done. And from that time to this present I have never had any touch of it until this Christmas.'

From the description of Bramston's disease it is very doubtful if this was gout. Two episodes of a flitting polyarthritis occurred, the first at the age of 26 years, the second 15 years later with no articular complaints between these two episodes, but it is clear that Harvey was thought by his patients and their friends to have gout himself. The evidence for this is very thin. Neither Harvey nor anyone else described his symptoms. He was not a wine drinker, was not an obese heavy eater, and does not appear to have been the type of person likely to acquire the disease, nor was there any record of his father or 6 brothers having any arthritic complaint.

What we do have from Aubrey is an account of his treatment of his condition, and this is interesting and possibly illuminating. Aubrey writes, 'He was much and often troubled with the gowte and his way of cure was thus: he would sitt with his legges bare, if it were frost, on the leads of cockaine-house, putt them into a payle of water till he was almost dead with cold and betake himselfe to his stove, and so 'twas gone. He was hott-headed, and his thoughts working would many times keepe him from sleepeing; he told me that then his way was to rise out of his bed and walke about his chamber in his shirt till he was pretty coole. . . .' And it appears that in his country house at Combe in Surrey caves were built so that he could retire to a cool place to meditate.

Erythromelalgia

This does not sound as though the condition Harvey was treating was gout, and I approached my old friend Kenneth D. Keele, a wise physician and a medical historian who has studied the life of William Harvey and has written a book about him,³ for his opinion as to what William Harvey really did suffer from if it were not gout, and he suggested erythromelalgia as an alternative diagnosis. This indeed seems more likely. Weir-Mitchell of Philadelphia described this condition in 1878.⁴ His patients were almost all male. After fever or exertion pains occurred of an intense burning nature in the foot or feet, mostly in the soles. Symptoms tended to come on more towards nightfall, throbbing, aching, and burning like an intense sunburn, the foot or feet becoming

more and more red, the veins standing out as if a ligature had been applied, the feet becoming a dark purple colour, the arteries throbbing violently; hanging the feet down, exertion, warmth or pressure aggravating the burning discomfort which was only eased by cooling the extremities with cold applications and elevation of the extremities. 'In the milder cases,' says Weir-Mitchell, 'it may come and go . . . while in severer cases the burning reaches the extreme of torture . . . the sufferer sleeps with uncovered feet and goes about without stockings in his house.'

In view of the absence of any description of Harvey's symptoms in the literature, in view of the absence of tophi in any of his portraits, and in view of the form of treatment he applied, Keele's suggestion that Harvey might have had erythromelalgia rather than gout has much to commend it. Gout until comparatively recent times was heavily overdiagnosed, as many other arthropathies had not then been identified, and many chronic or recurring joint conditions such as osteoarthritis, rheumatoid arthritis, psoriatic arthritis, and many others were probably then diagnosed as gout. As Benedik and Rodnan⁵ state, gout in medieval medicine was a synonym for arthritis, and Copeman⁶ notes that, although Sydenham (1624-89) was able to distinguish between acute rheumatism and gout, the latter term continued to embrace a large and undefined collection of syndromes throughout most of the 18th century. Any good evidence that Harvey suffered from 'morbus dominorum et dominus morborum' is lacking. All medical diagnosis based on past history is highly suspect, but a description of his own gout by Sydenham,⁷ for instance, is so excellent that it still stands as the best description of all time and could not have been taken to describe any condition other than gout. In the absence of any clinical description in William Harvey's case but a clear description of his therapy erythromelalgia appears to be the more likely diagnosis. It is of interest that Weir-Mitchell had studied uric acid crystals, had in his possession a portrait of William Harvey, and was himself one of the most eminent physician-cum-physiologists of his time, though he never mentions gout in the differential diagnosis of the condition he first described.

There are 6 Hippocratic aphorisms⁸⁻⁹ that refer to gout: no. 28, eunuchs do not take the gout nor become bald; no. 29, a woman does not take gout unless her menses be stopped; no. 30, a young man does not take the gout until he indulges in coitus; no. 40, in gouty affections inflammation subsides within 40 days; no. 55, gout affections become active in the spring and in the autumn. Only one refers to therapy, no. 25, 'swelling and pains in the joints without sores whether from gout or sprains, in most cases are

relieved by a copious affusion of cold water which reduces the swelling and removes the pain. For numbness in moderation removes pain.' It is possible that William Harvey really did have gout and treated it in the way outlined in this aphorism, but, if so, and if Aubrey's account is to be believed, Harvey carried the cold water treatment out much more thoroughly than any ordinary gouty patient would have done, and I find it hard to believe that any gouty patient would tolerate such treatment for long or persist with it. As Keele points out, in the whole of Sydenham's classical description of gout there is nothing about external applications of any sort except to condemn them, and Sydenham truly did suffer from gout. I would join with Keele in considering erythromelalgia a much more likely diagnosis than gout in the case of William Harvey.

References

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- 3 Keele D. *William Harvey: the man, the physician and the scientist*. London and Edinburgh: Nelson, 1965.
- 4 Weir-Mitchell S. *Am J Med Sci (Philadelphia)* 1878; 76: 1–36.
- 5 Bendik T G, Rodnan G P. A brief history of the rheumatic diseases. *Bull Rheum Dis* 1982; 32: 59–60.
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- 8 Copeman W S C. *A short history of the gout*. Berkeley and Los Angeles: California University Press, 1964: 22–4.
- 9 Wyndgaarden R G, Kelley W N. *Gout and hyperuricaemia*. New York, San Francisco, London: Grune and Stratton, 1976: 3.

Book review

Footwear and Footcare for Adults. By Janet Hughes. Pp. 204. £4.65. Disabled Living Foundation: London. 1983.

Footwear and Footcare for Disabled Children. By Janet Hughes. Pp. 153. £5.25. Disabled Living Foundation: London. 1983.

Problems Afoot: Need and Efficiency in Footcare. By Judith Kemp and J. T. Winkler. Pp. 221. £5.60. Disabled Living Foundation: London. 1983.

If the Disabled Living Foundation had done nothing else, it would be remembered for these three books. The first two, written or edited by Janet Hughes, are highly practical, comprehensive descriptions of foot problems and what can be done about them. They are essential 'bench books' which should be readily available in any hospital department, whether rheumatology, diabetic, orthopaedic, paediatric, or geriatric, where foot problems are seen. *Problems Afoot* is different. It is a forthright, carefully reasoned review of the national burden of foot ill health, contrasting it with the inadequacy of resources to deal with the burden. It is a

restatement of the health goals we should aim for and what must be done to achieve them. It should be compulsory reading for those who have influence in the DHSS. The number of places available for training chiropodists is too small, the rewards when they are trained too little. The regulations regarding DHSS priority foot problems make the work too unvaried, and the facilities offered to chiropodists in hospital are inadequate or inappropriate. The interface with other remedial professions as well as with physicians and surgeons is still blurred, where it exists at all. Professional responsibilities need defining and professional training needs to be protected by restricting the name 'chiropodist' to those who are adequately trained. The market forces which take trained staff out of the health service probably affect chiropodists more than any other of the caring professions.

Arthritis of the feet is the biggest single cause of foot problems requiring National Health Service footwear, and 1 in 50 adults in this country suffer, yet neither of the two British arthritis and rheumatism charities is listed alongside the British Diabetic Association or Age Concern as organisations to which the foot sufferer can turn for appropriate advice.

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