Harvey and Sensory Neuropathy

GWENETH WHITTERIDGE, MA, DPhil, FSA, Hon. FRCP

Some time ago, I came across the account of a hitherto unnoticed case of sensory neuropathy in a woman patient in St Thomas's Hospital whom William Harvey examined and in whom he was so interested that he described her to King Charles I. The description of the woman is contained among some extracts from the original papers of Robert Sidney, second Earl of Leicester (1595-1677), which are included in the Birch papers in the British Library, Add. MS 4161, f. 258'. This is the Robert Sidney whose daughter, the Lady Philippa, Harvey attended in her last illness and whose postmortem examination in 1620 he 'guided' (Keynes, Life, pp. 124-5). Sidney was with the King in Oxford between 1643-44, and from 1649-50 sheltered the royal children at Penshurst. He was evidently not at Court when Harvey reported the case to the King in 1633, but saw Harvey again in May 1651.

2 December 1633. My lord of Northumberland told me the same day he heard Dr Harvey the Physician, tell the King, that he had bin to see a homan (sic) in St Thomas Hospital in Southwark, who had no feeling at all, that he burnt her Neck and Cheeke with a hot iron; and that she being in bed, he put in his hand, and pulled of some hayre from her privy partes, and she never felt any thing, or seemed not to feele. That she eates, drinkes and sleepeys and her flesh is warme. That she tooke a pot, and could griepe it in her Hand and hold it, but unles she saw it, she knew not if she held it or no. That if her Hand and Arme were wrung she found a little pressure, but no paine at alle, nor any sense in the skin or outward partes, but as if there were twenty payre of Gloves between her and that which touched her. She is in that Hospital to be cured of weakness and Infirmitie, yet nothing is perceived amisse about her, but only here and there some spots, which seeme to be dead flesh. Of this inquire more, for it is a very strange thing, and if it be not an imposture, it alters the constant old opinion, that Feeling and Life depart together.

Dr Harvey confirmed this to me May 1651.

Interest in cases of sensory neuropathy has grown since the beginning of the last century and this may perhaps be the earliest of which any account still exists in England. Considering the variety of clinical conditions in which insensitivity to pain can be manifested, any suggested diagnosis in the case of this woman in St Thomas's Hospital is clearly impossible, but it is interesting to notice that she does show some features in common with a woman whose case was reported by T. J. Murray in an article, 'Congenital Sensory Neuropathy', published in Brain in 1973 (96, 387-94). In his history of a 26-year-old woman, a school-teacher, Murray found that from childhood she had shown no evidence of pain as a result of burns so severe as to need skin grafts, and that 'she did not seem to feel articles in her hands unless she was looking at them'. On examination, he found that pain and temperature sensation were absent below the elbows and knees and were considerably decreased distal to the mid-abdomen. She also showed chronic ulceration and suppuration, and her fingers and toes were marked by healed ulcer crater.

A further case of insensitivity to pain in which Harvey was interested was that recounted by Sir Kenelm Digby in his Two Treatises (Paris 1644) and concerned a servant of the College of Physicians. The only thing that we are told about him, however, is that although he was strong and worked well, he would 'grind his handes against the walls' till they ran with blood 'without his feeling of what occasioned it.' R. A. Hunter and I. Macalpine (Journal of the History of Medicine 1957, XII, 126) have suggested that the symptoms described are not inconsistent with a diagnosis of syringomyelia. His condition would not seem to have been the same as that of the woman in St Thomas's.

Harvey's interest in clinical neurology was discussed by the late Lord Brain in his Harveian Oration of 1959, 'William Harvey, neurologist'. There among the numerous but random observations made by Harvey at different times on diverse neurological symptoms, Lord Brain referred to this case of the College servant. He also quoted from Harvey's De generatione the description of the woman who fell into a profound state of coma during parturition, and he cited Harvey's allusions in the Lectures on the Whole of Anatomy of 1616 to the celebrated cases of Nan Gunter and 'Mary pin her cross-cloth'. As both Nan Gunter and Mary appear to have been cured by marriage, Hunter and Macalpine have suggested that their insensitivity to pain had some hysterical origin (Journal of the History of Medicine, 1957, XII, 512-15; Notes & Records of the Royal Society, 1958, XIII, 120).

Harvey's interest in all these examples of sensory neuropathy clearly stems from the problem as to how nerves can convey both the faculties of movement and sensation. Galen had maintained that there were two kinds of nerves, hard and soft; that hard nerves derived from the hard cerebrum and conveyed the power of movement while soft nerves arising from the soft cerebellum conveyed sensation. But by Harvey's time the
falsity of this opinion was recognised and Harvey was at a loss to know whether there were or were not two kinds of nerves, and, if not, whether both faculties came through the same nerve, and, if so, whether they existed simultaneously or sequentially. As no microscopic examination of nerves was possible in the early part of the seventeenth century, he did not know of the existence of nerve fibres and his bewilderment is understandable. In his De motu locali animalium of 1627 he discusses the whole problem of the action of muscle, of the relationship of muscle to nerve and of the action of nerve, but having reviewed the various theories he sadly concludes 'All this is doubtful'. (G. Whitteridge, 'On the local movement of animals', Proceedings of the Royal Society of London, B 206, 1979 1-13). It is most likely that he left this book unfinished because he could not answer the many questions which he perceived to be involved in the subject.

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Medical Motoring

The first decade of this century laid down the guide-lines for the continuing relationship of the doctor with his car. The British Medical Journal of those years bears witness in its correspondence columns and its leading articles. Buying a car was, and is, a serious business. 'It is not too much to say that the purchase of a motor car requires to be entered into with as much caution as the purchase of a horse.' Indeed, the horse had its champions; 'I have never had any difficulty in getting over 8,000 miles a year with two good cobs.' But this view was being edged out because 'The average country doctor who uses a car is, comparatively speaking, a poor man and keeps a car, as he finds it as economical as horse-flesh with the added advantage of covering more ground at a much quicker rate.' This correspondent indicates the serious nature of motoring for the doctor, as he goes on to suggest that only sports cars should be taxed, to leave the doctor doing his 15 to 18 miles an hour tax-free. Early motoring was far from pleasurable, according to the doctor who purchased a foreign car in 1902 and found that for every five miles it travelled it needed one hour of repairs. He felt much better when in 1906 he bought British and found little trouble with his £100 Rover.

There was a perplexing number of motor vehicles from which to choose. The 1908 Motor Show at Olympia had over 200 different cars ranging from £180 to £350. By that time four-cylinder petrol engines were on sale, but the motoring correspondent of the BMJ bid his readers be careful of such multiplicity, as the potential of the single cylinder engine was far from exhausted. Of course, there was always the steam car, the Stanley steamer being pre-eminent but with the disadvantage of being American. It was silent, free from vibration and could take three passengers up any hill. However, the time taken to get up steam made it impracticable for any doctor faced with an urgent call. It also had a nasty tendency for its pilot light to go out when standing idle, so the doctor needed a full box of matches on his rounds. A petrol-engined car could be started within three minutes of opening the coach-house door and did not need an attendant when left outside a patient's house. One rather mean doctor made the economy of lacking his groom, who cost him £1 weekly, and engaging a boy at 8 shillings weekly to clean, oil and start the new car. Many doctors considered that they must give personal and regular attention to the car's electrical system but the messy bits could be left to the low-paid helper. How wonderful to claim that a car could do 120 miles in a day and 60 miles without a stop.

The comment that if a doctor got a car he also got the best patients evoked a stream of hot denials; the car was not to be a status symbol for the profession. But motoring was not a luxury, rather a necessity of work. Everyone complained of the dust that the car raised and the country doctor was at risk of the night driver who had no lights. The wearing of goggles was essential and the proper design a matter of medical comment. Ill-fitting goggles pressed on the supra-orbital nerve to cause facial pain.

If the ease of visiting was the great advantage of car ownership, the speed of travel was a mixed blessing with the law. So it was with some delight that the BMJ of 1907 announced the decision of the magistrate at the South Western police court when a chauffeur appeared before him on a charge of driving a motor car at an excessive speed, alleged to be 28 mph across Wimbledon Common. The doctor who employed the chauffeur said that 'he had an urgent message to visit a patient who was very ill; under these circumstances he was not, he thought, exceeding his rights in directing his driver to go fast.' The magistrate dismissed the charge, remarking that 'if he were taken ill he would wish the doctor to arrive promptly.' What a nice man.