ME AND MY NEUROLOGICAL ILLNESS

Where is the lateral cutaneous nerve of the forearm anyway?

Charles Warlow

University of Edinburgh, Department of
Clinical Neurosciences, Western General
Hospital, Crewe Road, Edinburgh EH4 2XU.
Email: cpw@skull.dcn.ed.ac.uk

Even as a modestly busy general neurologist with a special interest in stroke, I must confess to no recall of ever having seen a patient with a problem affecting the lateral cutaneous nerve of the forearm. I had probably last thought seriously about the nerve in 1964 when I took my anatomy exams, and I presumably had seen it during the tentative dissection of an upper limb with my student colleagues in 1962. I suppose I must have thought about it again in the early 1980s, at least for long enough to have a picture put in my *Handbook of Neurology* (Warlow 1991). But this nerve is so insignificant for the medical neurologist that it is not even indexed in 'Bradley' under lateral, cutaneous, nerve or forearm (Bradley *et al.* 2000). Maybe Americans have done away with the nerve altogether as they advance to a higher form of primate life. However, it is still a British nerve indexed in the new edition of *Brain's Diseases of the Nervous System* (Donaghy 2001). But even here it causes confusion because the index directs the reader to two places, one of which is correct and the other of which is to do with the lateral cutaneous nerve of the thigh. The literary types who index for the Oxford University Press presumably do not need to distinguish between arms and legs while they dream of spires and poetry in pleasant parks and meadows.

So I was unprepared for self-diagnosis of any problem with this un-American nerve when I entered into consciousness following abdominal surgery a few years ago. I had other things on my mind, mostly a painful abdominal wound. But the next day I became aware that my left forearm

felt vaguely numb, presumably I thought something to do with the intravenous line in the dorsum of my hand and another one in my lower forearm. One or other had morphine going in, so maybe, I rather stupidly thought, that was why my arm felt numb. But the next day in a better state of mental alertness I traced out the cutaneous sensory disturbance with my right hand and marked it with a biro for further thought. Amazingly, I could search back in my memory and think, 'lateral cutaneous nerve of the forearm!' and it was too, I confirmed when I managed to get hold of the picture in my neurology book (Warlow 1991) (Fig. 1). There was no muscular weakness so this was not a lesion of the parent musculocutaneous nerve. The sensory distribution really did have that funny pointed bit going down towards the anatomical snuff box at the base of the thumb. The picture in 'Brain' (Donaghy 2001) gets this right, but not two really admirable publications – 'Mononeuropathies' by Staal and his Dutch colleagues (Staal *et al.* 1999) and 'Aids to the examination of the peripheral nervous system' (Anonymous 2000) which must have been in the briefcase of every British neurologist since it was first produced during the Second World War.

So what did it? The musculocutaneous nerve arises from the lateral cord of the brachial plexus (C5,6,7) and branches supply the biceps and brachialis muscles above the elbow. The nerve passes down between these two muscles, appears at the lateral margin of the biceps tendon, pierces the deep fascia just above the elbow, and runs on down the lateral aspect of the forearm as

Figure 1 Reproduced from Warlow 1991 with permission from Blackwell Science. This shows the approximate areas in which light touch and pain sensation are reduced in a lesion of the lateral and medial cutaneous nerves of the forearm.

the lateral cutaneous nerve. Trauma is really the only cause of trouble with this nerve although it can apparently be involved in neuralgic amyotrophy. But clearly even the clumsiest of abdominal surgeons couldn't have cut it. In any event, my surgeon had been carefully selected to be far from clumsy by the gastroenterologist that I had myself carefully selected (this surgeon selection business is a crucial part of the skill of being a physician in my view). Anyway it all got better in a few weeks. It must, I suppose, have been stretched or compressed by the anaesthetist or a theatre porter when I was being hauled around, or maybe the surgical assistant or nurse had leaned on it when I was anaesthetised. The intravenous needle in the forearm was clearly too distal to have been responsible.

All this did get me thinking about the neurological complications of surgery in general, particularly the minor ones that have probably never been prospectively well studied. Of course, to the abdominal surgeon, a trivial cutaneous nerve injury is an irrelevance, and to the patient too. We are more concerned with the horrors of fistulae, wound infections, drains carrying God knows what from God knows where, and

pulmonary embolism. But, maybe one or more minor complications stack up to cause at least worry for the patient that can be defused by explanation, and even some disability too. When I talk to patients about decisions surrounding carotid surgery it used to be all to do with the risk of stroke, important stuff. But after my own experiences, I now at least mention the occasional cranial nerve palsy, which may disturb swallowing and speaking for a few days (very rarely more permanently), and the numbness over the scar that seems to persist.

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