

of their means, the patients cannot reasonably be required to pay for it. In that case they may forgo their charges, either in part or altogether. A discretion is allowed to the hospital authorities; but if they exercise it so as to make any charge on the patient at all their statutory right of recovery against the insurers is at once extinguished. And insurers may claim that they must exercise their discretion in a reasonable way. If a patient is brought in who is obviously able to pay something, the hospital (insurers may say) cannot reasonably think that he is a pauper. They must make a charge under Section 16 and so lose the rights which the provisions of the Road Traffic Act give them. Moreover, they must make up their minds at once and before the insurers settle with their assured. If the insurers do so settle, and a claim from the hospital only reaches them at some later date, it will be at least open to the insurers to say that the matter is settled and finished. Any other interpretation would result in this—that claims of which the insurers knew nothing may be made upon them up to some indefinite point in the future. Although the courts will no doubt read the Act as generously for hospitals as they can, it is doubtful if they would hold that knowledge of these charges acquired after the settlement of the matter was knowledge within the subsection.

Parliament has now commenced a new session, and enough, we think, has been said to show that the law needs some amendment. A few changes would suffice to get rid of the difficulties. It is well known that they are causing serious trouble to hospitals, which should certainly not be allowed to suffer at a time when this new duty, readily undertaken and skilfully discharged, is being thrust upon them.

Nova et Vetera

WINSLOW AND THE SYMPATHETIC SYSTEM

BY

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The present year marks an interesting bicentenary in the history of neurology, that of the introduction, by Winslow, of the term "sympathetic" in application to certain parts of the nervous system.

Jacques-Benigne Winslow, of foraminiferous fame, was born in Denmark in 1669, and studied and taught anatomy in Paris. There he published, in 1732, his *Exposition Anatomique de la Structure du Corps Humain* in five small volumes. The style and temper of this remarkable work, which, as Garrison says, was the authoritative textbook on the subject for nearly a century, are best described in Winslow's own words, from the "Avertissement" at the beginning of the first volume:

"Je me sers d'un style fort serré, concis, et pour ainsi dire, Laconique. . . . Je me sers du titre d'Exposition Anatomique de la Structure du Corps Humain; parceque j'expose simplement cette Structure, comme je l'ai trouvé, par les Dissections fréquemment et différemment reiterées, et que je me tiens uniquement à ce qui regarde le Corps humain. Je ne m'étends pas beaucoup sur les Usages. Quelquefois j'en indique seulement ceux qui me parviennent être le mieux fondés sur la Structure connue; et quelquefois je n'en parle point du-tout, n'en étant pas assez sûr. Quand je n'en puis rien du-tout découvrir, j'avoue ingenuement mon ignorance, afin d'exciter ceux qui pourroient être plus hereux que moi."

This is a noble profession, and it was nobly carried out.

In Winslow's time, what we now know as the ganglionated trunks of the sympathetic system were called the intercostal nerves. They were looked on as arising within the skull from branches of the fifth and sixth cranial nerves, passing from this origin through the carotid canal to descend alongside the vertebral column. Winslow

altered the misleading name, and indicated the true nature of the cranial portion as an ascending branch of the trunk itself, not a descending stem.

With regard to the name, he says, speaking of the right and left trunks together:

"Ces Nerfs sont communément appellés Intercostaux. Ce nom ne répond nullement à leur situation, ni à l'étendue de leur route, comme on verra ci-après. J'ai cru que celui de grands Nerfs Sympathiques leur conviendrait mieux, à cause de leurs communications très-frequentes avec la plupart des autres Nerfs principaux de tout le corps humain."

In one place he refers to them as "les Sympathiques Universels, ou grands Sympathiques."

His interpretation of the cranial part as an ascending branch distributing fibres to certain cranial nerves is based on his observation that, in all subjects he dissected during nearly twenty years, the so-called rootlets of origin were attached to the cranial nerves concerned so as to form angles pointing forwards "et si aigu qu'on ne les peut regarder comme des Nerfs Recurrans." He supports his belief by the observation of his contemporary, Petit, that the sixth nerve is thicker beyond the point of attachment of the sympathetic twig than between that point and the brain.

The description of his "grand nerf sympathique" includes a remarkably full account of its branches and communications and peripheral plexuses.

But Winslow has more than a "grand sympathique." In considering the vagus he is impressed by its close association with the "grand nerf sympathique" in the thoracic and abdominal plexuses, and proposes to call the vagus the "Nerf Sympathique moyen."

"On voit aussi par là que ces deux grandes Paires de Nerfs ont un commerce continuel dans tous les Visceres du Bas-Ventre, aussi-bien que dans la Poitrine, comme on verra plus amplement dans la suite."

Winslow, of course, had no notion of the reciprocal action of these two nerves: he associated them anatomically. We to-day, functionally also, can hardly think of the one without the other.

Finally, Winslow introduces a "Petit Nerf Sympathique": this is our facial nerve. In his time, our seventh and eighth cranial nerves were known as the "portio dura" and "portio mollis" of the seventh or auditory nerve. Winslow points out that the "portio mollis" alone is the true auditory nerve. Of the other he says, without giving any reason, "Je donne à cette Portion du Nerf Auditif le nom de Petit Nerf Sympathique." Kuntz (*The Autonomic Nervous System*, London, 1929) is mistaken in thinking that Winslow selected the nervus intermedius (of Wrisberg) as his "petit sympathique"—the nervus intermedius was not then separately known, and it is clear from Winslow's text that he meant the whole of what we call the facial nerve.

In our terminology, following Langley, the autonomic nervous system comprises the sympathetic proper, and the parasympathetic outflowing from the mid-brain (in the III nerve) from the bulb (in X and IX and nervus intermedius of VII) and from the sacral part of the spinal cord. Winslow, without the microscope and without experimental methods, dependent solely on the naked-eye study of structure, made a remarkable beginning towards grouping together the constituent parts of this system. And when we recall our modern association of the sympathetic system with internal secretions, and such modern conceptions as those of Cannon in his *Bodily Changes in Pain, Hunger, Fear, and Rage*, it would seem that when Winslow introduced his "Sympathiques" and so gave us what is still our basic term for this system, he spake more wisely than he knew.