ON THE NATURE OF SCIATICA.

By F. C. Purser.

Few medical dogmas have been honoured with a longer period of unquestioning acceptance than the doctrine of Cotugno that the symptoms of sciatica are due to an affection of the sciatic nerve. It is over one hundred and fifty years since the Italian physician gave the first sound clinical account of ischias, differentiating it from other painful affections of the thigh. Cotugno was led to ascribe the pain to a lesion in the sciatic nerve on the evidence of an autopsy which he performed on a dropsical cadaver. In this case, the sciatic nerve on the affected side was thought to be more swollen than the other, and the pain was attributed to the pressure of the hydrops on the nerve. Since Cotugno’s time valuable symptoms have been observed which help greatly in diagnosis and not a few others which are, at least, of academic interest. Pathological examinations also seem to have been made from time to time with the result that a hydrops of the nerve or its sheath has been discarded as the cause of sciatica pain; now the pain is attributed to neuralgia, or, in a smaller number of cases, to interstitial neuritis of the sciatic nerve.

One may be pardoned some scepticism about these later pathological examinations. Personally, I cannot recall having seen a first-hand account of even one, but that they exist is not questioned, for author after author in text-books and systems of medicine pay them the homage of acceptance at their face value. In as far as they are repeated they are unconvincing if only because they are unaccompanied by clinical details of the case in question. Even Gowers, past master of clinical and pathological examination, records no personal observation in his account of the pathology of sciatica. He may be quoted:—

"The evidence of pathological changes is scanty. Rheumatic inflammation of the nerve is scarcely ever met with in its active stage; the disease is not one which is even attended by death from other causes, and the morbid changes are a matter of inference. There is indeed hardly any organic disease so common as sciatica, of which in its various degrees, opportunities for pathological observation are so few and so meagre. Signs of inflammation have been found, chiefly conspicuous in the sheath of the nerve, and invading the interstitial tissue in more severe and prolonged cases. They are such as are met with in all forms of perineuritis—swelling and redness, most distinct opposite the middle of the thigh—thickening of the sheath invading the substance of the nerve. Microscopical
changes have been found, similar to those in acute neuritis elsewhere, in
the rare opportunities for observation that have been met with."

This fairly sums up the pathology of sciatica accepted at the
present time, but a few amplifications must be mentioned.

(1) Sciatica is usually unilateral.

(2) The late J. A. Sicard classified sciatica as "low," "middle," and "high," and he sub-divided this latter with bewildering precision into radiculitis, ganglionitis, plexitis, and funiculitis. Funiculitis is the term applied to an inflammation of the nerve root between the ganglion and its junction with the sacral plexus, and is believed to occur with acute inflammation of the bony channel through which the nerve-root passes.

(3) Sciatica is generally associated with causes grouped as "rheumatic" and gouty; injury and strain are also held responsible for some cases. Diabetes is also regarded as a factor in its occurrence, and when it does complicate diabetes the sciatica is said usually to be bilateral. (It is irrelevant to my thesis, and not of much moment, but I may say I have never seen a case of sciatica and glycosuria in the same patient.)

(4) Many (authors of text-books are seldom amongst the number) assume adhesions between the nerve and its sheath, or between the sheath and the surrounding tissues, and as is well-known, manipulative treatment to break down these adhesions is widely advocated.

(5) All recognise a close connection between lumbago and sciatica. Lumbago is attributed to a fibro-myositis in the lumbar muscles, and it is proposed now to argue that sciatica, at least that form known as sciatic neuralgia, is as reasonably to be attributed to a fibro-myositis involving the muscles at the back of the leg as to any lesion involving the sciatic nerve.

Having as little pathological material to support me as the rest,
I propose to discuss first whether the symptoms of sciatica justify
our attributing them to any lesion whatsoever in the nerve. Later
I shall call attention to a paper on this subject by J. Helweg, of
Copenhagen, who approaches the subject in a new way.

I shall confine myself to a consideration of the seven best known
signs of sciatica, namely: pain, Lasègue's sign, Valleix's tender
points, absent ankle-jerk in the affected limb, paralysis and wasting
of muscles, and impairment of superficial sensibility. When the
three first-named signs exist alone the condition is one of neuralgia,
when the three last-named are present the inference is that we are
dealing with a neuritis of the sciatic nerve. Absent ankle-jerk in
the affected limb occurs without other sign of neuritis, but is
usually held to be a proof of neuritis.

Sciatic neuralgia, then, is shown by all or some of four signs:
pain, Lasègue's sign, Valleix's tender points, and absent ankle-

jerk. Of these four signs absent ankle-jerk (or definitely
diminished ankle-jerk) is the least common, as it is found in only
one out of eight or nine cases. Pain is invariably present; without
pain sciatica is not diagnosed. The other two signs are usual, but
Lasègue's sign may be poorly marked.