Letters

The Schilling Test

We have read the article on the Schilling test for pernicious anemia, written by Fairbanks and associates, in the August 1983 issue of the Proceedings (pages 541 to 544). In that article, the authors discussed the conditions that can cause misleading results of the Schilling test. We want to report on a condition that was not mentioned.

Patients with low serum folate concentrations exhibit considerably higher urinary excretion of vitamin B₁₂ after oral administration of both ⁵⁶Co-labeled vitamin B₁₂ and ⁵⁷Co-labeled vitamin B₁₂ intrinsic factor complex than do patients with normal serum folate concentrations.¹ This phenomenon may account for some falsely normal results in the test for vitamin B₁₂ absorption. In three patients with pernicious anemia and folate deficiency who had not received treatment, we found a normal result of a single-stage vitamin B₁₂ absorption test. Only after 1 month of vitamin B₁₂ and folic acid therapy did the vitamin B₁₂ absorption test become indicative of pernicious anemia.

We think that it is important to determine the serum and red blood cell folate concentrations before doing a vitamin B₁₂ absorption test, in order to avoid erroneous interpretation of spuriously normal results.

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REFERENCE


Electromyography and Sciatic Nerve Tumors

I enjoyed reading the article “Neurogenic Tumors of the Sciatic Nerve” by Thomas and associates in the October 1983 issue of the Proceedings (pages 640 to 647). On the basis of my own experience with 10 such patients, I disagree with the authors’ statement that electromyography is of limited value with such lesions, primarily for two reasons.

First, the electromyogram in many of these patients provides the first clue that the lesion involves the peripheral nerve fibers rather than the lumbosacral roots. Electromyography is especially useful when the tibial portion of the sciatic nerve is involved, and the foot pain, gastrocnemius and intrinsic foot muscle atrophy, and secondary mechanical low-back pain are misdiagnosed clinically as evidence of an S-1 radiculopathy. Several of the patients I studied had had normal findings on myelography, and at least one had undergone an unsuccessful lumbar laminectomy. In these patients, the low-amplitude or unelicitable sural or superficial peroneal responses, noted on the sensory conduction studies in the involved leg, first alerted my colleagues and me to the fact that the lesion was actually more distally located than suspected clinically. (Intraspinal canal lesions, such as radiculopathies, affect the sensory fibers proximal to the dorsal root ganglia and are, hence, associated with normal peripheral sensory conduction responses; in contrast, lesions involving the plexus or peripheral nerve fibers are distal to the dorsal root ganglia and are characteristically associated with low-amplitude or absent sensory responses.) Second, the statement that a sacral plexopathy cannot be distinguished from a high-sciatic mononeuropathy by electromyography is incorrect, at least in patients with relatively severe axon-loss lesions. If abundant fibrillation potentials are present in all of the muscles innervated by the sciatic nerve, including the hamstrings, but none is seen in the glutei or tensor fascia lata, then the lesion very probably involves the proximal sciatic nerve. Alternatively, if the glutei and tensor fascia lata contain abundant fibrillations as well, then the lesion involves the sacral plexus. In the same manner, sciatic nerve lesions proximal or distal to the midthigh can be localized on the basis of involvement or noninvolvement, respectively, of the hamstring muscles.

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Dr. Thomas replies

My co-authors and I appreciate Dr. Wilbourn’s comments. His points are well taken and certainly are valid under ideal conditions and in advanced stages of sciatic nerve tumors. Unfortunately, neither of these circumstances always prevails. In our experience, early cases of sciatic neuropathy or pelvic plexopathy do not necessarily fulfill the electromyographic criteria enumerated by Dr. Wilbourn, and when they do not, diagnostic uncertainty, clinically and electromyographically, may exist. Our own electromyographers, who are quite familiar with the electrophysiologic subtleties mentioned by Dr. Wilbourn, render us superb assistance. Oftentimes, they define the level of the lesion accurately; occasionally, they may not. The accuracy depends on the pathologic nature of the lesion, its mode of evolution, and the extent and degree of severity of involvement.

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