

OpEd: Drug-induced Neuropathy: New Optimism in the Treatment of a Challenging Old Problem

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Neuropathy is a nerve disorder that results in the symptoms of numbness, tingling and pain in the extremities. The legs and feet are usually affected first, but the arms and hands can be affected as well. The symptoms can range from mild to completely debilitating. Several million Americans are afflicted, and many millions more worldwide. Diabetes is the most common cause of neuropathy, but there are many other causes including alcoholism, lead poisoning, autoimmune reasons, and genetic causes. One other cause of neuropathy that is becoming more prevalent as new, powerful drugs are developed is drug-induced neuropathy. The list is long, but the most common culprits are: Cisplatin, Taxol, Thalidomide and drugs used in the treatment of HIV disease.

A common scenario is a young, healthy patient with no history of neuropathy gets treated for cancer with a combination of powerful, and effective chemotherapy drugs. The cancer is cured, but the patient is left with a highly debilitating nerve condition that significantly dampens any sense of success from the original treatment.

Traditionally, there was no treatment for this problem, and the hope was that when the drug was discontinued, the neuropathy would go away. Unfortunately, in many cases the neuropathy persists long after the drug is withdrawn. Current treatment involves medication to mask the symptoms of neuropathy.

The problem, however is that even when the pain is masked, the lack of sensation in the feet leaves the patient susceptible to painless breaks in the skin which can get infected and lead to amputation.



Traditional thinking about neuropathy is that since it is a systemic problem, any treatments or cures would have to be systemic in nature. Surgical treatments were simply not considered until recently. Nevertheless, in the early 1990's researchers, at the Johns Hopkins University in Baltimore found that in diabetic neuropathy there was a large subset of patients that actually had their symptoms of neuropathy greatly improved if the affected peripheral nerves were decompressed. What they found was that the diabetic nerves were swollen, stiff and noncompliant. Although the whole nerve was indeed affected by the diabetes, there were consistent, and specific areas where the nerve became hung-up, or trapped. Simply opening up these areas, and freeing up the stuck nerve improve the symptoms. So it seems that this systemic disease's symptoms are actually manifest at a few predictable, and surgically accessible areas.

After many years of success in the arena of diabetic neuropathy, the approach was tried on patients with neuropathy of other causes. And again the results were favorable. Neuropathy caused by many drugs has been treated using this approach including Cisplatin, Taxol and Thalidomide. Many other drug-induced neuropathies have probably been

treated in patients classified as “idiopathic” neuropathy otherwise known as neuropathy of unclear etiology. The patient may have previously taken a medication that induced the neuropathic condition, but the definitive link was never established and they were given the diagnosis of “idiopathic” neuropathy. One group of drugs recently undergoing some scrutiny is the statin cholesterol drugs. There is some concern that over the long term they may cause neuropathy. The ubiquitous nature of these drugs, and the tremendous positive effects they have on the cardiovascular system makes finding a way to mitigate any negative effects a high priority.

induced neuropathic nerves for the foreseeable future.

Over the last ten years, hundreds of patients have had decompression surgery for various forms of neuropathy. Statistically about 80% of patients will have a decrease in neuropathy related pain and 70% will have an increase in sensation in the bottom of the feet. Good candidates are in otherwise reasonable health, have adequate circulation in their legs and feet, are not more than 75 pounds overweight, have had their symptoms for five years or less, and demonstrate during examination that their nerve still partly functions.

While some drugs can be substituted for, or even replaced with newer drugs with better safety profiles, some drugs simply have to be given (i.e. chemotherapy) and the side effects dealt with after the fact. For this reason, there will probably be an increasing role for surgical decompression of drug-

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Many medications can be associated with the development of neuropathy, including:

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| Heart or blood pressure medications | Metronidazole (Flagyl) |
| Amiodarone | Nitrofurantoin |
| Hydralazine | Thalidomide (used to fight leprosy) |
| Perhexiline | INH (isoniazid) -- used against tuberculosis |
| Drugs used to fight cancer | Drugs used to treat skin conditions (Dapsone) |
| Vincristine | Anticonvulsants (Phenytoin) |
| Cisplatin | Anti-alcohol drugs (Disulfiram) |
| Drugs used to fight infections | |