## Table 1. Common neuropathic pain syndromes

Alcohol-induced neuropathy Brachial plexus avulsion (trauma) Brachial plexus neuropathies Carpal tunnel syndrome Chemotherapy-induced neuropathy Cisplatin **Paclitaxel** Vincristine Vinblastine Complex regional pain syndrome Diabetic neuropathy Fabry's disease Failed back syndrome Guillain Barre' HIV-associated neuropathy Viral involvement Antiretrovirals Phantom pain Postherpetic neuropathy Post radiation plexopathies Post stroke pain Surgical neuropathies Post mastectomy syndrome Postthoracotomy syndrome Trigeminal neuralgia Vitamin deficiencies

tolerate a fan blowing on or clothing touching the affected area. Additionally, the patient may describe hypesthesia in the affected area. The location of the pain is critical in determining the underlying etiology. The location of pain may be in a stocking or glove distribution, as seen in diabetic neuropathy, or along a single dermatome as a result of postherpetic neuropathy. Central pain after stroke can be located diffusely throughout the body. In general, the distribution of neuropathic pain follows a nerve, plexus, root or the cord. The pain may have a temporal pattern, worsening at different times during the day or night, and is often exacerbated by activity, such as movement or walking. Patients should be questioned regarding changes in gait, including frequent falls, as this may be a result of decreased sensation and motor weakness. Another indicator of decreased sensation associated with neuropathy is the report of frequent bruises in the affected region. Furthermore, questions regarding

bowel function and sexual activity reveal any potential autonomic nervous system dysfunction common in some neuropathies.

## **Physical Examination**

A comprehensive physical evaluation is crucial, with particular attention to the neurological examination, including the sensory, motor and autonomic systems. Sensory evaluation can differentiate large fiber versus small fiber damage. Reduced sensation to vibration (through the use of a tuning fork) or altered ability to sense proprioception suggest large neuronal fiber damage. Changes in temperature sensation in the affected region and altered response to pin prick are common indicators of small fiber dysfunction. The evaluation of tactile allodynia includes lightly stroking the area with a brush or cotton ball. Holding a cool or warm item lightly against the skin tests thermal allodynia. Reflexes are tested, particularly in the affected areas, and are often found to be reduced or absent. Standard motor evaluation should include observation of gait, as well as assessment of strength and tone. The primary purpose of the history and physical is to establish the diagnosis, rule out potentially treatable causes, and establish a baseline upon which to gauge the efficacy of analgesic therapy.

## PHARMACOLOGIC MANAGEMENT

A variety of pharmacologic therapies have been shown to be effective in relieving neuropathic pain. When initiating therapy, only one drug should be started at a time and titrated slowly. Prescribing several drugs at one time precludes determination of the most effective agent, or if side effects occur, the agent responsible for complications.

## **Nonopioids**

Nonopioids, such as non-steroidal anti-inflammatory drugs (NSAIDs) and acetaminophen, have limited usefulness in the management of neuropathic pain. However, some patients do report relief, so a trial may be indicated.