DIAGNOSIS OF NEUROPATHIC PAIN IN LEPROSY

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Neuropathic pain was formerly defined as pain initiated or caused by a primary lesion or dysfunction in the nervous system[1]. This definition, however, brought out some problems, including the difficulty to distinguish neuropathic dysfunction from physiologic neuroplasticity. According to the new definition neuropathic pain is a direct consequence of a lesion or a disease affecting the somatosensory system[2].

Recent evidence has shown that neuropathic pain is not uncommon in patients with leprosy[3]. The characterization of leprosy patient's pain as neuropathic is made after completion of thorough history taking and physical neurological examination. It is important to bear in mind that pain can also be nociceptive, psychogenic or a combination of these subtypes. In patients with leprosy, chronic ulcers, arthral and skeletal deformities and depression, for example, may all significantly contribute to the symptomatology of pain. In case of neuropathic pain, abnormal sensory findings should always be neuroanatomically logical and compatible with a definite lesion site[4].

The most important part of clinical evaluation is sensory examination. However, it is often necessary to perform the complete neurological examination in the usual sequence, because isolated sensory examination may lead to mistaken localization and wrong conclusions. Sensory examination includes testing of light touch (cotton wool), pin-prick sensation (wooden cocktail sticks or disposable pins), thermal sense (warm and cold objects), vibration (128-Hz tuning fork) and joint position sense. A frequent finding in patients with neuropathic pain is loss of pin-prick and temperature sensation. Neuropathic pain can also be stimulus-dependent. These so called evoked pains include allodynia and hyperalgesia. Allodynia is pain due to a stimulus that does not normally provoke pain. Hyperalgesia means an increased response to a stimulus that is normally painful. Allodynia can easily be demonstrated by lightly brushing the skin (dynamic allodynia) or applying hot and cold stimuli that are not normally painful (thermal allodynia). Stimulus-dependent pain is characteristic of both inflammatory states and neuropathic pain.

In all patients suffering from pain, the quality, location and intensity of pain should be defined. In order to help to understand the relationship between the location and quality of pain, it is often useful to ask the patients to mark the drawings on a body template according to where they are hurt and also indicate which sensations they are feeling (i.e. is the pain for example burning, stabbing or aching). Visual analogue (VAS), numeral rating, or verbal rating scales are used in the measurement of the pain intensity[5].

Single descriptors do not identify neuropathic pain but a combination of descriptors and findings in sensory examination improve the recognition of neuropathic pain. Based on this, a number of screening tools for neuropathic pain have been developed. These include *Leeds Assessment of Neuropathic Symptoms and Signs* (LANSS), *Neuropathic Pain Questionnaire* (NPQ), *Douleur Neuropathique en 4 questions* (DN 4) ID-Pain and painDETECT (5). It needs to be emphasized that these screening tools should never replace clinical judgment. They can, however, be useful in epidemiological studies and also in alerting the clinician to consider the diagnosis of neuropathic pain. Some of these screening tools may also help to differentiate between nociceptive and neuropathic pain components.

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