

Neuropathic Cancer Pain: Is It Linked to the Recurrence of Cancer?

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Cancer is a significant public health problem in every country. The World Health Organization reported that there were 14.1 million new cancer cases, 8.2 million cancer deaths, and 32.6 million people living with cancer (within 5 years of diagnosis) worldwide in 2012 [1]. The number of cancer survivors will increase due to improvement in cancer screening, advancement of cancer treatment, and the aging of the population [2,3].

Pain is a common symptom in cancer survivors [4]. In a systemic review [5], the reported incidence of pain was 33% to 64%. About one-third of the patients with pain presented their pain as moderate to severe. They may have acute and chronic pain related to direct tumor involvement, diagnostic or therapeutic procedures, or adverse effects of cancer treatment. They may also experience pain unrelated to cancer.

Cancer pain can be classified predominant type of pain: either nociceptive or neuropathic. In clinical situation, cancer pain patients commonly experience more than one type of pain. They may represent both nociceptive and neuropathic features, rather than distinct elements of a single process.

Neuropathic pain is defined as "pain arising as a direct consequence of a lesion or disease affecting the somato-sensory system" [6]. Neuropathic cancer pain (NCP) is

common and can be caused by direct tumor damage or as a consequence of cancer-directed therapy. In a recent systemic review, the prevalence of patients with NCP ranged from 19%–39.1%, including mixed pain as well as pure neuropathic pain. And, the causes of neuropathic cancer pain were cancer itself (64%), treatment of cancer (20.3%), related to cancer (3.5%), unrelated to the cancer (10.2%), and unknown origin (2%) [7]. Clinical characteristics of NCP include spontaneous burning, stabbing, or lancinating characteristics, hyperalgesia, and allodynia. Whatever the etiology of NCP is, it definitely arises from changes initiating in the damaged nerves, which in turn alter spinal cord and brain function, leading to altered plasticity at a number of sites [8]. The management of NCP may be therapeutically challenging. The pharmacotherapy, using combination of drugs with different mechanisms of action is a main therapeutic strategy. However, multimodal treatment, employing pharmacological therapy, non-pharmacological techniques, and psychological support, may be required to improve the quality of life along with sleep and mood.

In this issue of the Korean Journal of Pain, Srivastava et al. [9] present the relationship between persistent post-radiotherapy pain and loco-regional recurrence in head and neck cancer patients. In the current study, 38.3%

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of patients with persistent pain had loco-regional recurrence, compared to 2.56% of patients in whom pain subsided. Furthermore, they showed that there was a significant benefit with regards to survival in patients who did not have persistent pain. In addition, the prevalence of NCP reported 17.4% and, more than 60% of the patients who had NCP at 6 weeks after radiotherapy experienced recurrence during follow-up. Therefore, the authors showed that identifying patients experiencing persistent pain during outpatient follow-up visits would enable us to diagnose recurrent disease early in the course. There have been few studies to evaluate the relation between neuropathic pain and the recurrence of cancer or survival. In another study, 73% of patients with head and neck cancer experienced neuropathic pain, and a linear trend was seen in the neuropathic pain component and nociceptive component [10]. Therefore, we assumed that persistent nociceptive pain caused by tumor or cancer treatment may be associated with the occurrence of NCP. In this study, it was found that NCP seemed to be indicative of recurrence.

It is important for a physician to keep in mind that neuropathic cancer pain may be indicative of cancer recurrence and an appropriate evaluation for recurrent or metastatic disease should not be performed for early detection. Furthermore, well-designed prospective studies will be needed to validate the association between NCP and the recurrence of cancer.

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