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Migraine contributes to the presence of central neuropathic pain

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Sterile inflammatory changes due to the release of neuropeptides, i.e. calcitonin gene related peptide (CGRP), neurokinin SA and substance P in trigeminovascular system of brain stem is the likely mechanism of acute migraine attack. Recurrent attack of migraine sensitizes central and peripheral nervous system leading to chronicity. Although there are no structural changes occurs in brain stem but PET study proved several areas are activated during migraine attack like red nucleus (RN), substantia nigra (SN), dorsal raphe nucleus (DRN), periaqueductal grey (PAG) and locus caeruleus (LC). Pain initiated or caused by a primary lesion or dysfunction of brain including brainstem and spinal cord is called as central pain syndrome. As brainstem dysfunction also occurs in migraine it is likely that migraine can also produce central neuropathic pain. Sixteen cases of migraine have shown the features of central pain syndrome contralateral to the frequent hemicranial side and five cases independent of headache side. Risk factors for developing neuropathic pain are same as that of migraine with nociceptive pain on the affected body parts like sprain or strain in ligament tendon and muscles. Majority of those cases has predominant limb and trunk pain (n=17) rather than headache. All the cases are of migraine without aura. They are all diagnosed by the criteria laid down by the international classification of headache disorders (ICHD 3 beta). Central neuropathic are diagnosed by criteria laid down by group of expert from the neurologic and pain community. The mechanism behind reduction of headache after developing neuropathic pain is not known. Migraine and neuropathic pain management both are necessary for best outcome.

Recent Publications

- 1. Moskowitz M A (1984) The neurobiology of vascular head pain. Ann Neurol 16(2):157-168.
- 2. Weiller C, May A, Limmrolu V, et al. (1995) Brain stem activation in spontaneous human migraine attacks. Nature Medicine 1(7):658-660.
- 3. Headache Classification Committee of the International Headache Society (IHS) (2013) International Classification of Headache Disorders 3rd edition beta version. Cephalalgia 33(9):629-808.
- 4. R D Treede, Troels Staehelin Jensen, J N Campbell, G Cruccu, J O Dostrovsky and J W Griffin (2008) Neuropathic pain: Redefinition and a grading system for clinical and research purposes. Neurology 70(18):1630-1635.

Biography

Ramesh Bhattacharyya is a Consultant Neurologist and has avid interest in managing neurological pain disorders. He has established a reputed Neurological Pain Clinic in Tollygunge, Kolkata, W B, India. He regularly organizes medical camp and delivers lectures on neurological pain at various platforms. His aim in life is to give solace to the patient who suffers from this type of pain disorders.

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