Palmitoylethanolamide restores myelinated-fibre function in patients with chemotherapy-induced painful neuropathy.

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Abstract

We assessed the effect of palmitoylethanolamide (PEA) on pain and nerve function in patients with chemotherapy-induced painful neuropathy, in 20 patients undergoing thalidomide and bortezomib treatment for multiple myeloma. All patients were evaluated before and after a two-month treatment with PEA 300 mg BID using pain and warmth thresholds; blinded examiners measured motor and sensory nerve fibre function and laser-evoked potentials. Although no variables returned to normal values, pain and all neurophysiological measures assessing Aα, Aβ, and Aδ fibres significantly improved (P < 0.05). In contrast, warmth thresholds, assessing unmyelinated afferents, remained unchanged (P > 0.50). Although a placebo effect might play a role in the reported pain relief, the changes in neurophysiological measures indicate that PEA exerted a positive action on myelinated fibre groups. PEA, possibly by moderating mast cell hyperactivity, relieved conduction blocks secondary to endoneural edema. In a severe condition such as painful neuropathy associated with multiple myeloma and chemotherapy, a safe substance such as PEA provides significant restoration of nerve function.

PMID: 22229320 [PubMed - indexed for MEDLINE]