Ischemic ulcer pain includes not only nociceptive pain but neuropathic pain components, based on a discriminant function analysis using McGill Pain Questionnaire

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Purpose

McGill Pain Questionnaire (MPQ) is composed of 78 words, which indicates underlying mechanisms of chronic pain conditions.

Ischemic ulcer pain is generally considered as a nociceptive and inflammatory pain condition, however, it is sometimes refractory to NSAIDs and opioid treatment. Here we categorized ischemic pain into nociceptive pain (NocP) or neuropathic pain (NeP), on the basis of patients’ complaints of pain characters using MPQ.

Method

Exp-1) We investigated pain characters of 365 patients with NeP and 124 patients with NocP by using 78 words in the MPQ, and thereby we developed a discriminant function, which efficiently discriminates NocP from NeP, Exp-2) We applied the function to 18 ischemic pain patients (before and after peripheral revascularization) and categorized their pain characters into either NocP or NeP.

Results

Exp-1) The discriminant probability of the function was 72.8% (P<.05), suggesting comparably accurate discrimination NocP from NeP. Among 78 words, only “annoying” was not utilized in the function. Exp-2) On the basis of the function, 9 of the ischemic pain patients' complaints were classified into NeP. After revascularization, 4 of 10 ischemic pain patients’ complaint remained NeP characters.

Conclusions

Our results suggest that ischemic pain should be considered as mixed pain condition with NocP and NeP and it should be treated with medications for NeP (eg, pregabalin, duloxetine) in combination with NSAIDs and opioids.