

# Comparison of Measurement Properties of the DN4 Pain Scale, LANSS and Pain Detect Scale in Patients with Knee Osteoarthritis

Kadriye Öneş<sup>1</sup>, Mustafa Aziz Yıldırım<sup>2</sup>, Aysel Çınar

Istanbul Physical Therapy Rehabilitation Education and Research Hospital, Turkey

E-mails: [kadriyeones@yahoo.com](mailto:kadriyeones@yahoo.com), [mustafaaziz1907@hotmail.com](mailto:mustafaaziz1907@hotmail.com)

**Abstract:** Objective: Osteoarthritis (OA) is a common joint disease and causes important morbidity. Neuropathic pain can be defined as a pain associated with functional abnormality of the nervous system. Neuropathic pain syndromes are heterogeneous conditions. These syndromes do not depend on a single etiopathogenetic mechanism or a clinical entity. Patients experience one of many symptoms, such as pain, paresthesia, dysesthesia, hyperalgesia, and allodynia. To compare measurement properties of the DN4 pain scale, LANSS and pain detect scale in patients with knee osteoarthritis.

Methods : One hundred twenty two knee OA patients were evaluated in this study. Pain scores using Visual Analogue Scales (VAS), Western Ontario and McMaster Universities Osteoarthritis Index (WOMAC) and neuropathic pain scores using painDETECT, LANSS and DN4. The painDETECT score was distributed from 0 to 38. neuropathic pain is likely when score is  $\geq 19$ , patients with LANSS scores of  $\geq 12$  were considered to have neuropathic pain and  $>4$  scores are considered neuropathic pain in DN4 scale. Results: Our study identified %13.1 of our knee OA patients as likely to have NP according to LANSS scale (vas:  $4,9 \pm 1,6$ ), % 8.1 with painDETECT score (vas:  $4,9 \pm 1,9$ ) and %38,5 with DN4 scale (vas:  $4,8 \pm 1,5$ ) .. All scale score was significantly correlated with the VAS and WOMAC pain severity. Compared with the painDETECT score, there was a tendency for positive correlation with the LANSS, for negative correlation with the DN4, but these correlations were not significant. Conclusions: DN4,6 painDETECT,22 and LANSS,4 designed to distinguish NeuP from other types of pain using patient-reported pain descriptors (and in some cases examination findings). DN4 scale is short while the other scale is long but more effective for neuropathic pain diagnosis.

**Key words:** dn4, lanss, pain