ARE SELF-REPORTED PAIN SCALES IN PEDIATRICS VALID?

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Background: Pain is the most common symptom for presentation to an orthopaedic practice and orthopedists rank 4th among top prescribers of opiates. Pain acuity, etiology and severity have been published as guiding factors for pain assessment and management. In an attempt to address the underassessment and undertreatment of pain, pain was even considered the 5th vital sign for a period of time. Assessment of pain using validated severity assessment instruments including the Visual Analogue Scale and the Wong-Baker FACES® Scale, is common in orthopaedic practices. The purpose of this study is to evaluate the validity and sensitivity of self-reported pain assessment tools administered to pediatric and adolescent patients presenting with a primary complaint of knee pain.

Methods: A retrospective review of 211 patients with a primary complaint of knee pain in a single practice over a nine-month period was completed. Medical records were reviewed for demographics, sport, laterality, symptoms, and factors described as influencing the pain. Prior to orthopaedic evaluation, patients were given an electronic tablet to complete patient reported outcomes measures and the visual analog scale (VAS). Patients were asked, electronically, “Do you have pain today?” and to verbally rate the pain using a Wong-Baker FACES® Pain Rating Scale (FACES).

The FACES scale, typically a 0-5 rating, was normalized to a 0-10 scale for comparison to both the VAS and the pain component of the pedi-IKDC (Pain-pIKDC). A Pearson’s correlation was used to compare the VAS and the Pain-pIKDC with the FACES scores to determine validity. A paired t-test was used to identify differences between the three measures.

Results: Of the 211 subjects, 112 were females and 99 were males, with a mean age of 13.9 years (range 7-18). 82% of patients reported presenting for pain due to a specific injury and not of spontaneous origin.

The mean FACES score was 1.26 (normalized to 2.52) with a median score of 0. Compared to the FACES, the mean VAS was 4.22 (p<0.001) and Pain-pIKDC was 3.66 (p<0.001) noted to be both a statistically and clinically significant difference. When comparing the FACES to VAS, a weak correlation was noted (0.360, p<0.001). A stronger correlation was noted between the VAS and the Pain-pIKDC (0.752, p<0.001).

66.4% of patients reported no pain on the FACES but reported pain >1 on the Pedi-IKDC. 80.5% of patients reported no pain on FACES but pain of >1 on the VAS. Only 12.2% on VAS and 16.2% on Pain-pIKDC reported no pain. For both the VAS and Pain-pIKDC, the sensitivity of detecting “no pain” is low at 19.2% and 30.2% respectively.

Conclusion: Though pain is widely accepted as an important factor for patient care management, clinicians should be aware that self-reported pain assessment tools in pediatrics and adolescents, without verbal confirmation, may inflate reported pain intensity and lead to possible overtreatment.

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