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Should Local Anesthesia Be Used in the Performance of Arthrocentesis and Joint Procedures?

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PURPOSE: Arthrocentesis and joint injections are critical outpatient procedures in rheumatology and orthopedic surgery. Physicians often disagree concerning the degree of pain a patient experiences during physician-performed syringe and needle procedures and whether local anesthesia should be used in needle procedures, including arthrocentesis. We hypothesized that arthrocentesis is a painful procedure for most patients, and the discomfort of this procedure can be markedly reduced with local anesthesia.

METHODS: 51 subjects each underwent arthrocentesis of at least 2 joints. All of the patients first underwent arthrocentesis with a conventional syringe without anesthesia, and then either underwent arthrocentesis with lidocaine anesthesia using 1) a conventional syringe, or the reciprocating procedure device (RPP). The RPD is a safety device that replaces the conventional syringe physician-performed syringe and needle procedures. Pain was measured with the validated Visual Analogue Pain Scale (VAPS) with severe pain being defined as a VAPS score of ≥ 6 .

RESULTS: Arthrocentesis without anesthesia and a conventional syringe caused severe pain in 94% of subjects (48/51) (VAPS score of ≥ 6). In contrast, local anesthesia reduced severe pain to 50% (16/32) with the conventional syringe and to 16% (3/19) with the RPD. Pain scores (VAPS) without anesthesia and the conventional syringe were 8.6 ± 2.6 , with anesthesia and the conventional syringe 6.75 ± 2.51 , and with anesthesia and the RPD 3.63 ± 1.98 . Thus, local anesthesia reduced pain scores by 22% with the conventional syringe and 68% with the RPD; and reduced severe pain by 44% with the conventional syringe and by 78% with the RPD.

CONCLUSIONS; Arthrocentesis without anesthesia is a significantly painful procedure with greater than 90% of subjects suffering severe pain. Local anesthesia markedly reduces the pain of arthrocentesis and is most effectively administered with the RPD. Local anesthesia and a safety device such as the RPD should be used for arthrocentesis.