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The effects of home interferential therapy on post-operative pain, edema, and range of motion of the knee.

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OBJECTIVE: We studied the effects of home interferential current therapy (IFC) on postoperative pain, range of motion, and edema in subjects undergoing anterior cruciate ligament (ACL) reconstruction, menisectomy, or knee chondroplasty.

DESIGN: Randomized, double-blind, placebo-controlled prospective study.

SETTING: A tertiary care outpatient orthopaedic clinic/ambulatory surgery center.

SUBJECTS OR PARTICIPANTS: Eighty-seven subjects were separated into three groups based on their type of knee surgery and within each group randomized into a treatment or placebo group.

INTERVENTIONS: All subjects received home IFC units. Subjects randomized to treatment group received a working IFC unit. Placebo subjects received units that were previously set to deliver no current. MAIN OUTCOME MEASUREMENTS: Post-operative edema at 24, 48, and 72 hours, and weeks 1-8; range of motion at 1, 3, 6, and 9 weeks; pain immediately after surgery, at 24, 48, and 72 hours, and weeks 1-7; and amount of pain medication taken at days 1-10 were compared between treatment and placebo groups.

RESULTS: All IFC subjects reported significantly less pain and had significantly greater range of motion at all post-operative time points. ACL and menisectomy IFC subjects experienced significantly less edema at all time points, while chondroplasty subjects experienced significantly less edema until 4 weeks postoperatively. CONCLUSIONS: These findings indicate that home IFC may help reduce pain, pain medication taken, and swelling while increasing range of motion in patients undergoing knee surgery. This could result in quicker return to activities of daily living and athletic activities.

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