

# Prospective Randomized Controlled Trial of the Effectiveness of Cold Gel

Olavi V. Airaksinen, MD, PhD, Associate Professor (Kuopio University Hospital, Kuopio, Finland);  
Nils Kyrklund, MD; Kyösti Latvala, MD; Jukka P. Kouri, MD; Mats Grönblad, MD, PhD; Pertti Kolari, PhD.

## INTRODUCTION

Cold application as a therapeutic modality following soft tissue trauma is an important clinical question because the goal of using this modality is to limit edema, decrease pain, and produce effective muscle relaxation.

## AIM

The aim of this study was to compare the effectiveness of cold gel to placebo gel with patients after soft tissue injury

## DESIGN

Prospective randomized controlled study.

## PATIENTS

65 patients with soft tissue injury of ankle, leg, knee or hand area were randomly assigned to active cold gel (Ice-PowerR) (10 women and 23 men with mean age of 32+12 years) and placebo gel (11 women and 21 men with mean age of 32+10 years) groups.



## CLINICAL METHODS

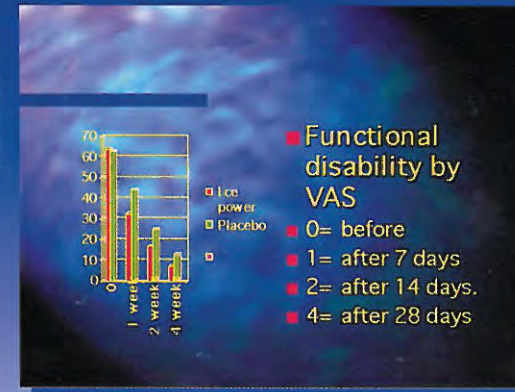
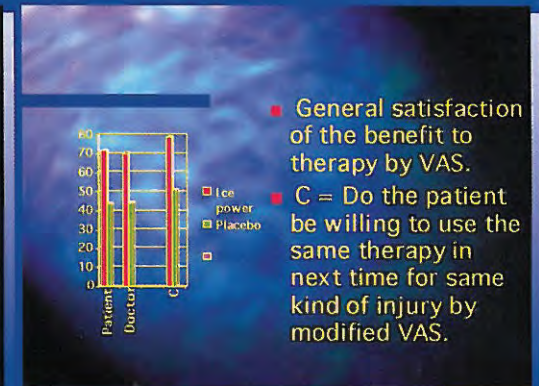
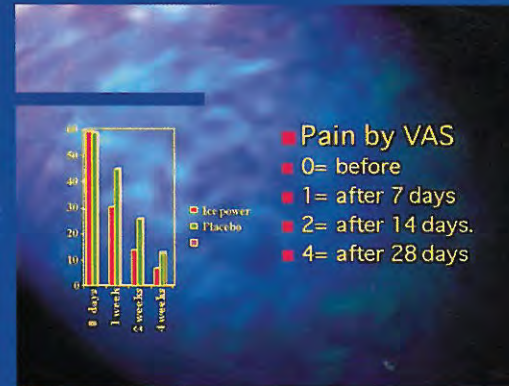
Patients were included to this study after clinical examination. After randomisation the patients used 14 days the gel. The clinical intervention was made after 7 days, after 14 days and after 28 days from the beginning of the study. Other cold therapy was not allowed, but medication with NSAIDs and bandages were allowed in both groups. Main Outcome Measures: Visual Analogue Scale (VAS= 0-100mm) was used for evaluation of the actual pain at rest and motion, disability and satisfaction to the therapy at each intervention visit. The overall benefit of therapy and patient satisfaction was also measured by Questionnaire (from no benefit or harm =0 to excellent benefit=3). Clinical examination and an estimation of the benefit of therapy of the examiner was carried out also each visit.

## VAS SCALE



## RESULTS

Pain decreased from 59 to 30 during first week, to 14 during two weeks and to 7 at the end of study in active cold gel group. In placebo group the pain decreased from 58 to 45, 26 and 13 respectively ( $p < 0.001$ ). The patient's satisfaction to the treatment was 71 in active cold gel group and 44 in placebo gel group ( $p < 0.001$ ). Also the disability decreased significantly rapidly in active cold gel group.



## CONCLUSIONS

Active cold gel decreased significantly the pain and disability after soft tissue injuries. The patient's satisfaction was significantly better to cold gel than placebo gel. In general cold gel improved significantly the rehabilitation results of soft tissue injuries.

# ICE<sup>®</sup> POWER

