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Does Cold Therapy Reduce Pain After Arthroscopic Rotator Cuff Surgery: A Randomized Controlled Trial

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Disclosure

no financial conflicts of disclosure

Study at a glance

Purpose: To compare the acute effects of a ice bandage on pain and swelling after the first 72 h after arthroscopic rotator cuff surgery of the shoulder with no cold therapy.

Methods: According to a power analysis, 22 patients were randomly assigned to two groups after arthroscopic surgery. The first group wore a cold bandage, and the second group without any cold therapy. Pain and swelling were measured 1, 8, 24 and 72h after surgery. The use of pain killers was also monitored during the trial. Differences within and between groups were analyzed.

Results: All patients were assessed at all time points. There were no significant difference in pain nor swelling at any time point between the groups. Additionally, no significant difference between the groups was found in terms of use of pain medicine.

Conclusion: Based on the results of this study, no significant reduction of pain could be seen with cold therapy compared to without. Clinicians should question the need of expensive cold bandages in the short-term post-operative treatment after arthroscopic surgery of the shoulder.

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Introduction

Following surgery and injury, cooling of the operated or injured area has an analgesic effect[1].

There are studies that showed no benefits of cold compression therapy compared with only cold therapy[2-3]. In most of these studies, the knee was investigated. Only one has adressed the shoulder with no difference[4].

No studies have been done with cold therapy alone vs. no cold therapy.

Therefore, the purpose of this study was to elucidate whether a treatment using a cold pack bandage would reveal an acute beneficial effect with respect to pain, swelling and skin temperature of the shoulder compared with no cold therapy.

Method

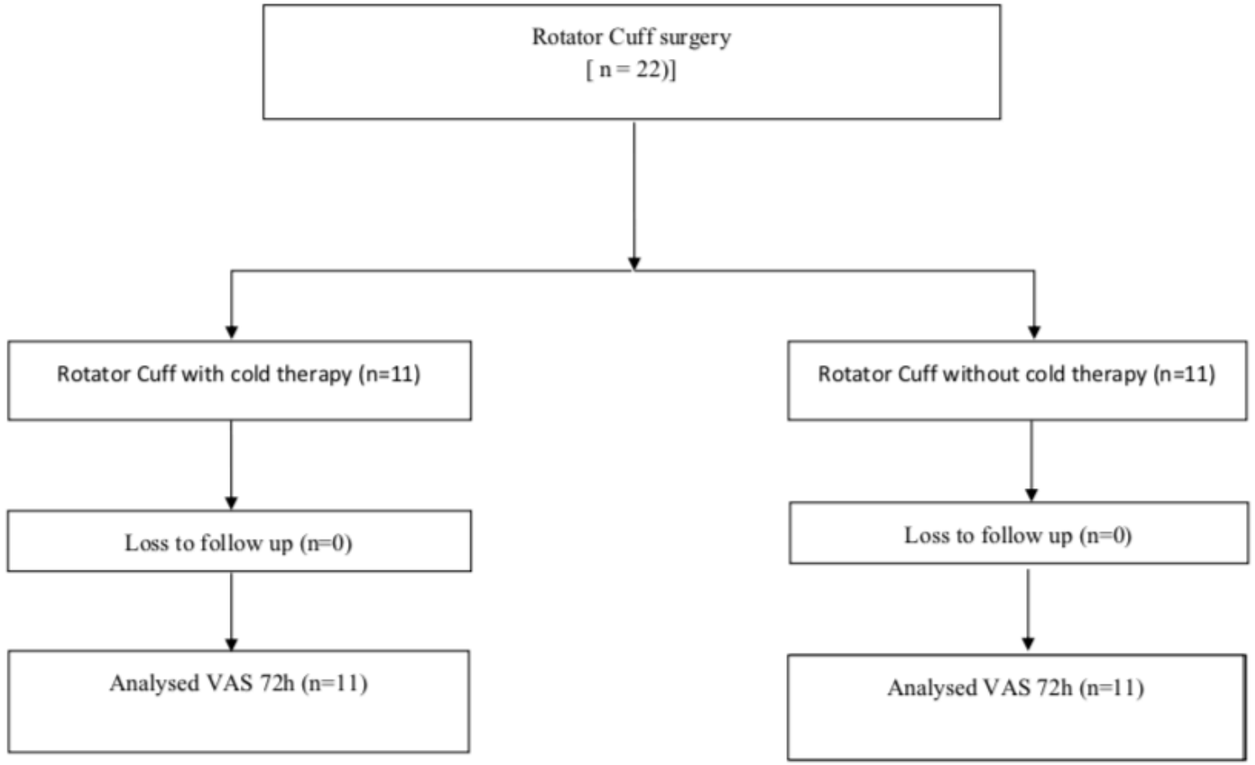
Study design: RCT, primary endpoint VAS 72h postoperatively.
According to power analysis, 22 patiens were needed for a mean difference of 10 % or more.

Inclusion criteria: Arthroscopic Rotator Cuff Surgery

Surgical method: One center, one surgeon, arthroscopic rotator cuff surgery with ASD.

Rehabilitation: Shoulder brace. Restricted ROM first 4 w. Standaridized analgetic prescription.

Flowchart



22 patiens were randomized

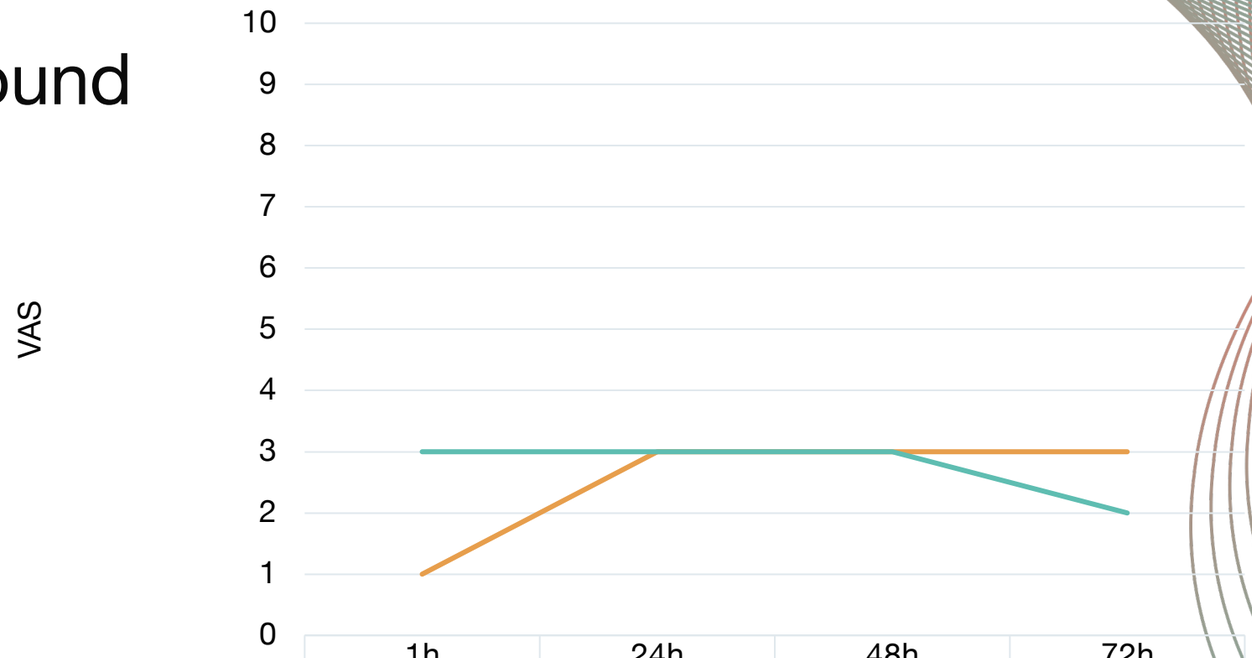
No loss to follow up

Demographics

		RC with cold therapy (n=11)	RC without cold therapy (n=11)	p-value
Age at inclusion	mean ± SD	56± 9	61± 9	n.s.
Gender: female	n (%)	5(50)	5(50)	n.s.
Time injury-recon	d± SD	67± 55	60± 55	n.s.
OP time	min ± SD	74± 15	83± 14	n.s.
Double Row	n(%)	11(100)	11(100)	n.s.
ASD	n(%)	11(100)	11(100)	

Primary endpoint

No sig. difference was found at any time-point.



	1h	24h	48h	72h
RC with cold	1	3	3	3
RC without cold	3	3	3	2

The median VAS-score at different time-point

Discussion

- No significant reduction of pain could be seen with cold therapy compared to without

- No difference was seen in either swelling or in terms of use of pain medicine

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