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A Pre-Experimental Study To Assess The Effectiveness Of Cryotherapy On Post-Operative Pain Among Appendectomy Patients In Selected Hospitals Of Raipur District, Chhattisgarh.

Biju Lal[1], Dr. (Prof.) Khem Chand[2]

[1]Biju Lal, Research Scholar, Faculty of Nursing, Desh Bhagat University, Mandi Gobindgarh, Punjab
[2]Dr. (Prof.) Khem Chand, Professor, Faculty of Nursing, Desh Bhagat University, Mandi Gobindgarh, Punjab

Abstract

Background: Cryotherapy is a non-pharmacological intervention used to manage post-operative pain and reduce inflammation. Appendectomy, a common surgical procedure, often results in moderate to severe post-operative pain. This study investigates the effectiveness of cryotherapy in reducing pain in post-operative appendectomy patients.
Aim: To assess the effectiveness of cryotherapy in reducing post-operative pain among appendectomy patients in selected Hospitals of Raipur District, Chhattisgarh.
Methodology: A pre-experimental, single-group pre-test post-test design was used. A total of 60 patients who underwent appendectomy were selected through convenient sampling. Pain levels were measured before and after cryotherapy using a standardized pain rating scale.
Results: Pre-test findings revealed 50% of participants had poor pain levels, 36.7% average, and 13.3% good. Post-test showed a significant shift: only 13.3% reported poor pain levels, 41.7% average, and 45% good. A bar chart and frequency table were used to represent the findings. Cryotherapy was effective in reducing post-operative pain among appendectomy patients. It is recommended as a cost-effective and simple intervention to be incorporated into post-operative nursing care.

Keywords: Cryotherapy, Post-operative Pain, Appendectomy, Cold Application, Non-Pharmacologic Pain Management, Nursing Intervention

Introduction

Cryotherapy, the application of cold, is a well-established method for controlling pain and inflammation following surgical interventions. It helps reduce local metabolism, swelling, hemorrhage, and muscle spasms. Appendectomy, being one of the most common emergency surgical procedures, often results in significant discomfort. With increasing attention toward non-pharmacological pain management techniques, cryotherapy has shown promising results.

Methodology

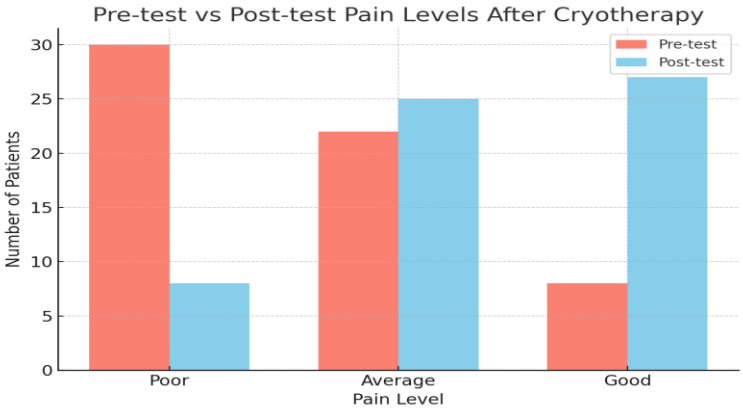
This study utilized a pre-experimental, one-group pre-test post-test design. A total of 60 patients undergoing appendectomy were selected from selected Hospitals of Raipur District, Chhattisgarh. through non-probability convenient sampling. Cryotherapy was applied using ice bags at the surgical site, and pain was assessed using a numerical pain rating scale before and after the intervention. The collected data were analyzed using descriptive and inferential statistics.

Findings of the Study

Pain levels were categorized into three groups: Poor, Average, and Good. Prior to the intervention, 30 participants reported poor pain levels, 22 had average, and only 8 experienced good pain relief. After cryotherapy, a significant shift was observed—only 8 patients remained in the poor category, 25 were in the average group, and 27 experienced good relief.

Table 1: Distribution of Pain Levels Before and After Cryotherapy

Pain Level	Pre-test (n=60)	Post-test (n=60)
Poor	30	8
Average	22	25
Good	8	27



Discussion

The study demonstrates that cryotherapy significantly reduced post-operative pain among patients who underwent appendectomy. The findings align with previous research suggesting that cold application reduces pain by vasoconstriction and decreased nerve conduction. This intervention not only aids in comfort but also reduces dependency on pharmacological agents which may have side effects. Education and training on the use of cryotherapy should be integrated into post-operative care practices.

Conclusion

Cryotherapy is an effective, low-cost, and easily implementable intervention to reduce post-operative pain among appendectomy patients. The study supports its inclusion in standard nursing post-operative care to enhance recovery and comfort.

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