

The Effect Of "Balut" Therapy Device On Knee Pain In Osteoarthritis

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Article Info	ABSTRACT
<p>Keywords: Ginger Compress, Osteoarthritis, Wrap Therapy,</p>	<p>Studies Osteoarthritis is one of the degenerative elements most customarily discovered in musculoskeletal diseases; osteoarthritis is the most common motive of restricted movement and feature; the region most often affected is the knee joint (Susilawati et al., 2015). The incidence of osteoarthritis dramatically follows the growth in patient age. As many as 70% of patients elderly over sixty-five years old suffer from osteoarthritis (Suhendriyo, 2014). The major hassle skilled by osteoarthritis sufferers is constrained helpful hobbies. Osteoarthritis can also cause disturbances in purposeful activities, along with trouble on foot, lengthy distances, standing from a squatting position, going up and down stairs, and disruption in valuable activities. Pain management techniques consist of pharmacological remedies and non-pharmacological therapy. Pharmacological remedy consists of drugs, while non-pharmacological therapy includes bodily remedy, modalities, and cognitive and behavioral techniques. The physical remedy to alleviate pain consists of numerous varieties of skin stimulation (massage, nerve stimulation with transcutaneous power, acupuncture, bloodless or warmth or compresses application, and exercise). Heat utility is a simple movement that has long been regarded as a powerful technique for reducing pain or muscle spasms. Heat can be distributed through conduction (hot water bottles, wet compresses, heat). Pain from bruises, muscle spasms, and arthritis respond appropriately to warmth (Price and Wilson, 2005;1087-1088). Ginger has pharmacological results that might be efficacious as a remedy (Team Lentera, 2002; 1). This study is a quantitative observation with a move-sectional quasi-experiment layout and uses the chi-square (bivariate) statistical check. The population is all citizens of RT 05 RW XVI Tlogosari Kulon Semarang. Sampling used purposive sampling—place and time of research at RT V RW XVI Tlogosari Kulon Semarang. The research tools and substances used by researchers are the 'BALUT' (Knee Bandage) tool, which is an aggregate of the use of a knee decker and ginger compress.</p>
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INTRODUCTION

Aging Osteoarthritis (OA) is a not-unusual degenerative sickness that impacts the articular cartilage and underlying bone and is characterized by continual structural and practical degeneration of the synovial joints. Approximately 10% to fifteen% of aged adults (> 60 years) suffer from osteoarthritis worldwide, and it is estimated that this can increase to a hundred thirty million humans by 2050. (Poole A.R. 2001). Individuals with OA often revel

in aches and stiffness around the hip joint, inflicting boundaries in everyday sports. OA has been defined as a multifactorial and complex disease, which includes genetics, getting older, weight problems, biomechanics, and joint laxity. (Andriyani R, Husanah E, 2019)

Studies show that immoderate mechanical strain can trade the homeostatic balance immediately, causing harm to the chondrocyte extracellular matrix for you to propose a shift inside the balance among statistical and statistical hobby, but favors statistical activity. During the early stages of OA, expanded infection triggers the body's natural immune device to apprehend cellular damage and irritants. This causes the influx of inflammatory mediators, matrix-degrading proteinases, and strain reaction factors in the cartilage. While the body is attempting to restore, phenotypic modulation of chondrocytes together with unusual matrix molecules is produced and modifications the behavior of the cells.

A pharmacological remedy consisting of non-steroidal anti-inflammatory tablets is used for ache control, while non-pharmacological therapy can treat numerous OAs, including bodily characteristics and mental statistics. Management of osteoarthritis using quite a few rehabilitation methods is the idea for lowering symptoms, dealing with pain, enhancing functional obstacles, and first-rate lifestyles. (Hidayat, S., & Putra, I. D. A. 2016)

Physical therapy to relieve aches consists of diverse skin stimulation (rub down, nerve stimulation with transcutaneous strength, acupuncture, bloodless or heat or compresses software, and exercise). Heat software is a simple action that has long been acknowledged as a powerful method for reducing aches or muscle spasms. Heat can be allotted via conduction (warm water bottles, wet compresses, warmth). Pain from bruises, muscle spasms, and arthritis reply well to warmth (Price and Wilson, 2005;1087-1088). Ginger has pharmacological results that might be efficacious as a medicinal drug (Team Lentera, 2002; 1).

Rehabilitation therapy can save you from modern OA sickness and joint degeneration. Following the guidelines of medical exercise tips for non-pharmacological interventions along with manual remedy, healing therapy, and different conservative techniques as a part of the management of patients with hip and knee

METHOD

This research is a quantitative observation with a quasi-experimental design and a move sectional one-group pre-submit design. It uses a paired T to look at the statistical test to peer the effect of "Balut" on knee pain and an N advantage score test to peer the percentage of Bandage's effectiveness in lessening knee aches. The population is all citizens of RT 05 RW XVI Tlogosari Kulon Semarang. Sampling looks at purposive sampling, including the place and time of RT V RW XVI Tlogosari Kulon Semarang's studies. The research gear and materials researchers utilize are the 'BALUT' (Knee Wrap) device, which is a mixture of a knee decker and ginger compress.

RESULTS AND DISCUSSION

This chapter reports the consequences of studies concerning characteristic records and looks at the effects of bandage remedy equipment on knee pain in osteoarthritis.

Characteristics of respondents primarily based on gender: All respondents were girls, namely 30 respondents (one hundred). Earlier than the bandage remedy was achieved, most respondents had been within the slight pain category. Notably, 17 respondents (fifty-six.7 7%) and the least had been within the mild pain class, namely five respondents (16.7%). After the bandage remedy, the maximum number of respondents had been within the moderate ache class. Namely, 28 respondents (ninety-three.Three%), and the least have been mild and extreme, with one respondent every (3.3%). It may be concluded that the p cost = zero.000 < 0.05, meaning there is a distinction between before and after bandage remedies for knee pain in osteoarthritis. The proportion value of the N gain rating is fifty-seven. , 6% means that bandage therapy treatment for knee pain in osteoarthritis is quite a practical class.

Discussion

This study was conducted on 30 female respondents (100%). From the study outcomes, statistics show that the Paired T-Test results for pain earlier than and after bandage therapy have been that the p-value = zero.000 < 0.05, meaning there was a difference before and after bandage therapy for knee aches in osteoarthritis, and the effects of the N Gain Test Score price The percentage of N advantage rating is fifty-seven. 6% means bandage therapy treatment for knee aches in osteoarthritis is inside the practical class. A knee ache is a pain within the knee joint that can be skilled by everyone at every age. Most knee pain that happens may be treated at domestic,

However, a few situations require medical remedy, consisting of surgical treatment, or can cause prolonged aches, joint damage, and even incapacity if not handled specially. The effect of aches in osteoarthritis is lower within the high-quality of lifestyle expectancy, including severe fatigue, decreased range of frame motion, and pain in motion. The stiffness gets worse in the morning when you wake up. The pain is intense at the beginning of motion, but the stiffness does not last long, specifically less than a quarter of an hour. Stiffness in the morning causes reduced movement ability in extension moves and confined physical mobility.

Non-drug therapy includes training, weight loss, physical remedies, and occupational therapy. In education, what's important is to convince patients to be unbiased and not continually depend on different human beings. Although knee pain can't be cured, the patient's first-class lifestyle may be advanced. The working mechanism of the knee decker is to provide stress around the knee and keep the knee area warm. The effectiveness of heat compresses will increase blood glide to achieve an analgesic effect and muscle rest so that the inflammatory technique is decreased. Warm compress remedy is accomplished in the subacute and continual levels in osteoarthritis to reduce pain, growth joint flexibility, lessen strain (compression) and pain within the joints, loosen up muscular tissues, and flex connective tissue (tendon ligament extensibility). The content material of ginger is beneficial for decreasing osteoarthritis pain because ginger has spicy, sour, and fragrant houses from oleoresins such as zingerone, gingerol, and school. Oleoresin has sturdy anti-inflammatory and antioxidant abilities. Water and oil content is not. Evaporating ginger is an enhancer that could boost the permeability of oleoresin to penetrate the pores and skin without inflicting inflammation or harm to the peripheral flow. Content Fresh ginger rhizome and its

energetic substance are oleoresin together with gingerol, son gaol, and zingiberene, which might be homologs of phenol through a heating technique. Thermal degradation of gingerol into zingerone, school, and other elements is formed by heating dry and clean rhizomes at a water solvent temperature of a hundred OC. Ginger additives can suppress irritation and modify biochemical techniques that activate acute and persistent inflammation consisting of osteoarthritis via suppressing seasoned-inflammatory cytokinins and chemokines produced using synoviocytes, chondrocytes, and leukocytes. Ginger can efficiently inhibit chemokine expression.

CONCLUSION

Respondents had been female, namely 30 respondents (100%). Respondents had been within the mild pain category. Namely, 17 respondents (fifty 7%), and the least had been within the mild pain category, notably five (16.7%). After bandage therapy, the maximum number of respondents was within the moderate ache category. Namely, 28 respondents (93.Three%), and the least became moderate and intense, namely one respondent each (three.Three%). The effects of the Paired TTest, take a look at it, showed that the p-value = zero.000 < zero.05 means variations earlier than and after bandage remedy for knee pain in osteoarthritis. The effects of the N Gain Score check show that the percentage value of the N Gain Score is fifty seven.6%, which means bandage therapy remedy for knee aches in osteoarthritis is within the pretty powerful class. Providing Balut remedy, an innovation in knee pads with heat ginger compresses, effectively reduces knee pain because of osteoarthritis.

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