

Topical ginger for the chronic inflammatory condition of osteoarthritis

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■ Abstract

Ginger is a significant external application for chronic inflammatory conditions such as osteoarthritis because it activates and strengthens weakened physical and life processes in the limb metabolic regions. This paper summarises common changes observed in the physical, life, emotional and 'I' being for people with osteoarthritis along with a rationale for using the hot stimulating forces of topical ginger to manage the debilitating symptoms of pain on movement and subsequent loss of independence. Results of a recent pilot study demonstrate the positive effect of 7 consecutive day's treatment using either the ginger compress or a standardised ginger patch for a group of 20 adults with osteoarthritis. Participants had the option to continue using the ginger patches at home for a further 24 weeks. After 7 days treatment, mean total scores on the modified Health Assessment Questionnaire showed a reduction in pain, chronic fatigue, global effect and mobility of 48 %, 49 %, 40 % and 31 % respectively, with scores progressively declining over the following 24 weeks. Topical ginger applications have the potential to manage osteoarthritis symptoms and increase independence for people with this debilitating condition.

■ Keywords

Chronic inflammation
Ginger
Osteoarthritis
Topical
External application
Pain
Ethereic
Pilot study
Health Assessment Questionnaire

Introduction

Zingiber officinale (ginger) is an ancient plant that has been valued for thousands of years in the diet and traditional medicine of Eastern cultures. European hospitals specialising in anthroposophical medicine report beneficial effects for a range of chronic health conditions, when ginger is applied externally as a compress over the kidney region. Recent qualitative research has found ginger compresses to the kidney region have a warming and relaxing effect on people with osteoarthritis (1). This paper extends previous articles in the journal "Der Merkurstab" on the value of ginger external applications (2, 3) and reports the results of a recent pilot study, when a manually prepared ginger compress and a standardised ginger patch were applied topically for osteoarthritis (4).

External applications

External applications refer to the physical application of a substance to the body, with the intention of improving a health condition. They are used extensively in anthroposophical medicine for a wide range of conditions (5, 6). External applications have special significance for medicine because; 1) they unfold their activity on the largest nerve sense organ, the skin and, 2) the skin is the boundary between the human being and the outer material and etheric worlds. The skin's powers of sensory perception, for example of touch, warmth, pain and movement become weakened with a tired constitution, such as in chronic illness and aging. The skin of a child is permeated by sensibility; a 3 year old has approximately 80 meissner corpuscles (receptors of touch and pain) per sq mm of epidermis, while an adult may have 15 (7). The etheric body is a spiritual concept that is understood to build up and preserve the physical from dissolution throughout life and relates to the living world of endless motion, flexibility and change (8). A tired weak etheric body in the human being can be observed where there is loss of fluidity in the skin, muscle and joints, while a healthy etheric body manifests in smooth, rounded, fluidic, mobile skin, muscle and joints. Healing involves treating the etheric body that radiates from the earth and the cosmos and is subtly breathed in through our senses that act as transmitters of consciousness be-

Tab. 1: Common changes in osteoarthritis

"I" individuality Emphasis on intellect & imagination Weakened senses & lack of consciousness eg touch, life, warmth, movement Social difficulties with reticence towards others Often live alone Weak sense self, tendency over-accommodate others Lack healthy coping skills in times stress	Warmth/metabolic Overall warmth deficit Lack peripheral warmth with areas of localised cold—joints, hands, feet Weak metabolic processes—bladder, kidney, digestion Circulatory disturbances—poor circulation, sense inner cold
Astral Wakefulness—inner unrest, agitation Light sleeper Thought life repetitive—stuck Body fixations—reluctant to accept new approaches Hypersensitive—pain, irritations, excitement Tense & anxious	Breathing/mobility Stiff musculoskeletal system Tense cramped muscles Disturbed ventilation—tense breathing Lack inner joint space—loss airiness & mobility Medical history—lung, kidney, ear, sinus problems Movement lacks balance—insecure
Etheric Exhaustion—weak anabolic processes Lack vitality—loss energy Thought life—difficulty concentrating, lost in periphery Sense heaviness—depression Lack inner protection – affected by cold, wet, wind	Life processes Joints contracted—osteophytes in capsule, lack fluidity and space in joints Body stiff—lack elasticity Disturbed life processes—breathing (lung), warming (blood vessels) and nourishing (digestive organs)
Physical Loss individual structure & joint form Loss physical functionality—body hindrance Difficulty in flowing, intentional movement	Body form Physical form disintegrates—joint atrophy Muscle tone and tendon strength weakens Tendency limp & look downwards—shoulders often hunched

tween the earthly and spiritual worlds. For example, through the physical sensory organ of the skin we experience inner processes of touching, warming, hurting and moving and when we are conscious of concepts of touch, warmth, pain and movement then thoughts from the etheric world are within us. We could say we breathe in thoughts from etheric spheres through sensory nerve activity, which enables energising force and creative actions (9–11).

The external application of ginger is one of the most significant treatments used in anthroposophical medicine because it activates and strengthens human etheric processes in the limb metabolic regions (3). When applied to the mid-back over the kidney region there is stimulation of warmth and light/air processes, with a corresponding balancing effect on the nerve sense, rhythmic and metabolic limb systems (1, 12). Ginger therapy is an external treatment that is used for a diverse range of chronic conditions such as arthritis, metabolic disturbances, excretory, respiratory, anxiety and depressive disorders (5).

Osteoarthritis

Osteoarthritis (OA), the most common form of arthritis, is a chronic inflammatory deterioration of synovial joints that causes pain on movement and affects those with aged and tired constitutions (13, 14). As with all disease, in OA the human enters more consciously into the body than is the case in health and healing must involve releasing this increased consciousness that manifests as pain on movement. Overly strong consciousness makes excessive demands on the etheric forces, which are subsequently prevented from supporting the physical body. In OA the feeling of pain on movement disturbs healthy consciousness, draining the etheric forces needed to support healthy joints. Typically in OA there are disturbances in the senses of touch, life, warmth, balance, movement, self and thought that affect the ability to draw in energy from the cosmic and earthly spheres further depleting the nerve sense, rhythmic and metabolic organs. OA is an example of the breakdown of mineral processes in the joint predominating over the up-building life-giving etheric processes of healthy moving fluids, accompanied by increased consciousness of pain and weakened sense of self. OA manifests when there is a disturbance in the healthy functioning and inter-relationship between the physical, etheric, astral/consciousness and I individuality being, as defined by Steiner (8). *Tab. 1* is an attempt to summarise frequently observed physical and physiological changes in people with osteoarthritis alongside changes in the I individuality, astral, etheric and physical being. Ideally, this table is interpreted creatively by health practitioners, with each person acknowledged as having an individual response to the disease.

In arthritis, sulphuric plant processes are often used to increase unconscious etheric activity by activating and strengthening the internal warmth processes (11, 15). The stimulation of the kidney region by external applications of ginger is based on an understanding of using the strong, hot and stimulating sulphuric forces of ginger to activate and strengthen the up-building etheric processes of a depleted metabolic limb system. As the more commonly used ginger compress would not be viable to implement in a quantifiable study, as a self treatment, or to ensure reproducible quality in the community, a standardised ginger patch, with the same active ginger ingredients was developed. The following summary of a recent pilot study shows the beneficial effects of the ginger compress and a ginger patch for people with osteoarthritis.

Pilot study

Between 2011–2012, twenty adult volunteers were recruited in New Zealand from medical clinics. All participants had radiologically and clinically confirmed OA, with pain reported as 5/10 on a 10 point likert scale for at least one year prior to the study. Exclusion criteria included; joint replacement of the affected joint, rheumatoid arthritis, fibromyalgia, cancer and other serious health conditions, and those familiar to the

treatment, having corticosteroids and/or anti-coagulants in the past 12 weeks. Participants completed a 5-item modified Health Assessment Questionnaire (MHAQ) weekly for 3 weeks then 4 weekly for 24 weeks and a 4 question short arthritis assessment scale (SAS) (16) at baseline. The 5-item modified Health Assessment Questionnaire (MHAQ) has a 100mm visual analogue scale (VAS) for pain, fatigue and global effect, the HAQ-II for functional status (17) and a health satisfaction question on a categorical scale. Appropriate ethical approval was obtained.

Patients visited the medical clinic daily for seven days to receive ginger therapy, while lying supine in a comfortable, quiet space for 45 minutes. They were alternatively allocated to seven days treatment with either the ginger compress or ginger patch applied to the lower back and nurses monitored temperature, pulse, respiration, blood pressure and weight before and after each treatment. Participants recorded pain scores on a 100 mm VAS and noted changes in medication daily for 21 days (7 days before, 7 days during and 7 days after ginger therapy). Participants had the option to continue using ginger patches at home for a further 24 weeks.

Results of pilot study

The 20 consenting adults with OA, aged 35-90 years (mean age 64 years, 80% female) had a mean pain score at baseline of 2.1, with 3 being the most extreme pain. Most participants had OA of the hips and/or knees (17/20, 85%) and suffered symptoms 1-25 years (mean 8.1 years). Participant daily pain scores for 21 days show a downward trend (Fig. 1). All participants registered a reduction in pain following ginger therapy irrespective of concomitant medication, activity level or severity of symptoms. A comparison between MHAQ scores for the compress and patch groups show a strong co-relation (Fig. 2). The maximum score is 3.0, the patch group commenced with a higher overall mean score 1.85 and completed with an overall lower mean score 0.95, while the compress group commenced with a mean score of 1.75 and completed with a mean score of 1.1.

The MHAQ mean total scores for all participants after therapy for pain, fatigue and global effect show percentage responses of 48%, 49% and 40%, respectively and for functional status 31% (Fig. 3). All scores progressively declined over the following 24 weeks; 73% pain, 76% fatigue, 72% global effect and 63% functional status. Health satisfaction showed a positive shift from 7 days before therapy, when 80% were dissatisfied to 7 days after therapy 70% were satisfied then after 24 weeks self-treatment 83% were satisfied (Fig. 4).

Ginger therapy was well tolerated, no adverse effects were reported and participants were 100% compliant.

Discussion

Participant symptoms of chronic pain, fatigue, global effect, functionality and dissatisfaction in health significantly reduced after therapy, with both the ginger compress and ginger patch. These positive responses

Fig. 1: Daily pain scores compress/patch

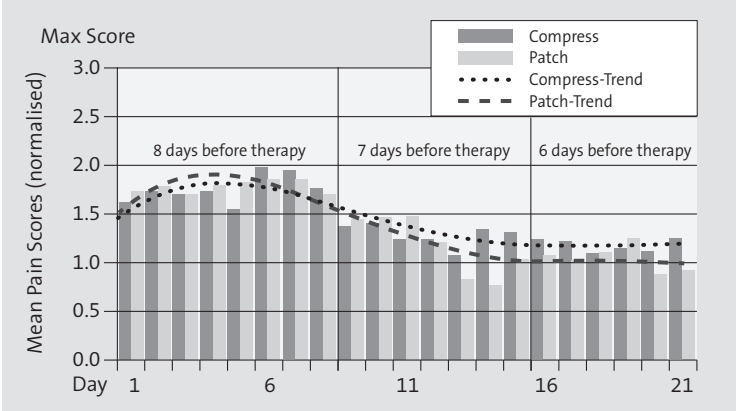


Fig. 2: MHAQ scores compress/patch

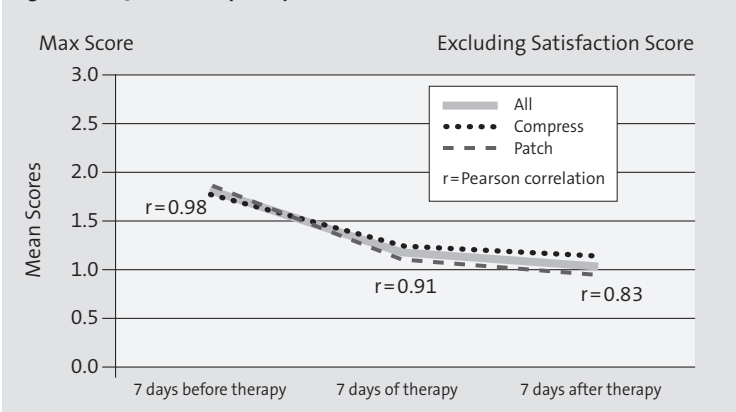


Fig. 3: MHAQ scores and % improvement in 4 domains

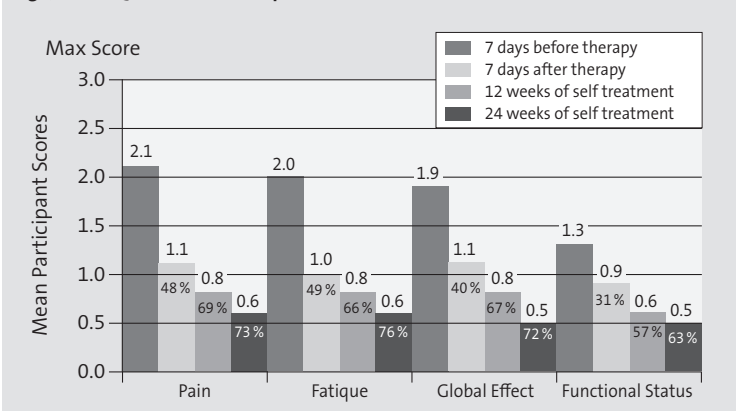
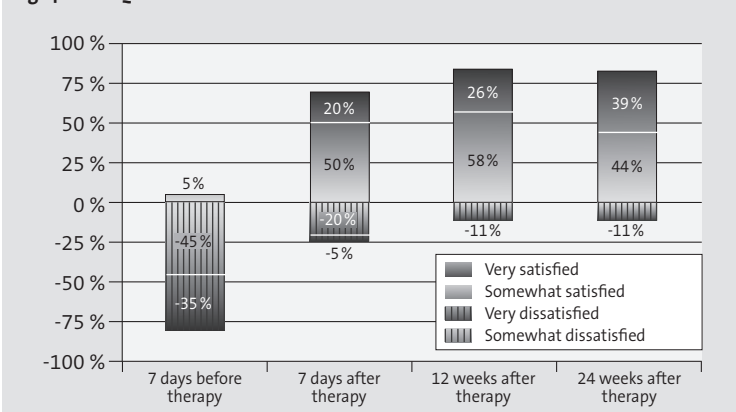


Fig. 4: MHAQ health satisfaction



continued over the 24 weeks self treatment in the home. These data are similar to the effects observed using other warmth and relaxation therapies for OA (18–20). Many people with OA seek out and use complementary and alternative medicines, especially topical applications (21–23). Topical applications of ginger have the additional advantage of avoiding the negative effects of high doses of internal ginger extract or the peripheral anaesthesia often caused by topical capsaicin. The participants in this study varied widely in age, physical characteristics, co-morbidities, duration and site of OA. Future research on larger numbers of a more homogenous cohort is required for results of statistical significance.

Conclusion

OA accounts for the majority of joint replacements and musculoskeletal pain and disability in older adults in Western society. Ginger therapy has potential for use with people for whom conventional treatments provide insufficient pain relief or are unsatisfactory due to personal preference, complex co-morbidities and/or adverse effects. External ginger therapy is a convenient, simple and economical option that needs to be considered in the care of the aged with OA. The ginger patch offers additional confidence for hospital use, research and continued self treatment in the home.

External applications are important for people of all ages because when the skin is activated, there is stimulation and increased awareness of the outer world that demands an inner conscious response. The skin is a transmitter of consciousness between the physical and etheric worlds and our inner response to this experience. External applications of ginger over the mid-back stimulate sensory innervations of related skin, subcutaneous tissue, muscles, organs and bones, with the enlivening and up-building processes of ginger being experienced by the recipient's innermost core; the largest bones in the body and the metabolic organs.

The external application of ginger is the most versatile topical treatment used in anthroposophical medicine. It is found to significantly impact on the physical, mental, emotional and personal sense of identity of recipients and is used effectively for a variety of illnesses such as: chronic inflammatory arthritis, bronchitis and colitis as well as chronic anxiety and depressive states.

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Conflict of interest statement

No conflict of interest has been declared by the author, who prepared the standardised ginger patch for exclusive use in the pilot study.

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