Soap-scented oil skin patch in the treatment of fibromyalgia: A case series

Yon Doo Ough

Department of Anesthesiology, Beloit Memorial Hospital, Beloit, WI, USA

Abstract: Treatment for fibromyalgia is largely empiric and supportive, and favors a multidisciplinary approach. Despite treatment, symptomatic relief is often inadequate and temporary. Over 90% of fibromyalgia patients seek alternative medical care. There is much anecdotal evidence that applying a bar of soap to the skin can relieve leg cramps. Expanding on this idea, I created a skin patch from soap-scented oil, which was used to treat muscular pain and spasms. After receiving positive feedback from several patients, I hypothesized that the scent of the oil itself, applied directly to the skin, is responsible for the pain-relieving and muscle-relaxant properties of the skin patch. Furthermore, I hypothesize that this soap-scented oil skin patch is an effective treatment for the pain associated with fibromyalgia.

Keywords: fibromyalgia, headache, soap-scented oil skin patch

Introduction

Soap has existed for over 2,000 years. It is a ubiquitous and essential product for modern daily life. Except for its cleansing and antiseptic effects, no other medicinal benefits have been previously described in the medical literature (Wolf et al 2000).

There is much anecdotal evidence that applying a bar of soap to the skin can relieve leg cramps. In a popular newspaper column, Dr. Gott recommends the use of a bar of soap to prevent nocturnal leg cramps (Gott pers comm.), advising patients to sleep with a bar of soap between their legs. Following this example, I assembled a skin patch made of crushed bar soap, and achieved successful results in regards to relief of muscle cramping and pain. I further experimented with the use of this soap patch for various other painful medical conditions.

It was noted that the soap patch was successful in relieving pain from muscle cramps, knots, and even the trigger point pain associated with chronic myofascial pain syndrome. The soap patch also is effective for smooth muscle spasms, relieving the pain from menstrual cramps, intestinal cramps, and kidney stone.

Hypothesizing that the scent of the soap was the active ingredient responsible for alleviating pain, I have since assembled the skin patches with a soap-scented oil (SSO), rather than bar soap itself, and hope to continue to expand its applications to other disease states.

One such area of interest is fibromyalgia. Fibromyalgia is a common, chronic, and complex disease that is defined as widespread musculoskeletal pain with multiple tender points. Patients with fibromyalgia also tend to experience symptoms of depression, sleep disturbance and fatigue, as well as a poor quality of life and a high incidence of disability (Chakrabarty and Zoorob 2007). These patients also frequently report migraine headaches, and nearly 80% of this population rates them as severe, although many have not sought treatment for their symptoms (Marcus et al 2005).

Correspondence: Yon Doo Ough
Department of Anesthesiology, Beloit Memorial Hospital, 1969 West Hart Road, Beloit, WI 53511, USA
Tel +1 608 364 5226
Fax +1 608 364 5227
Email yonough@gmail.com

Treatment for fibromyalgia is largely empiric and supportive, and favors a multidisciplinary approach including psychotherapy, physical therapy, medication, exercise and behavioral therapy. Despite treatment, symptomatic relief is often inadequate and temporary (Millea and Holloway 2000). Over 90% of fibromyalgia patients seek alternative medical care, including acupuncture, herbal medicine, yoga and massage therapy (Berman et al 2000; Crofford and Appleton 2001).

I hypothesize that application of the SSO skin patch is an effective treatment for the pain associated with fibromyalgia.

Materials

Soap-scented oil manufactured by Belle-Aire Fragrances, Inc. was used for this study. The components of this oil are citronellol, geraniol, camphor, eucalyptol, and thymol. There is no actual soap in the scented oil.

Due to the occasional skin irritant effects of undiluted scented oils (Foster and Johnson 2000; Weiss and Fintelmann 2000), the SSO was diluted with castor oil to a final concentration of 5% SSO. Castor oil was originally chosen as the dilutent for the SSO because of its frequent use in the medical field (McGarey 2004). All patches in this study were made using 5% SSO.

An impermeable surgical drape was used for the template of the patch, upon which a 4-inch by 3-inch absorbable sponge was centered. The sponge was soaked with 7 ml of 5% SSO, and ten minutes were allowed for absorption. The sponge was then covered with a sheet of adhesive tape. All completed SSO skin patches were stored in sealed plastic bags to prevent evaporation and dissipation of scent.

Methods

Eighty three patients with fibromyalgia contacted me with a request to try the SSO skin patch. Among these patients, fourteen who reported consistently severe pain (pain score 7 and higher) were selected for the study. They are all female, between the ages of 43 and 69 years old, (Table 1). All patients gave informed consent, and the study protocol conformed to the ethical guidelines of the 1964 Declaration of Helsinki.

A pain scale based on numeric ratings was used, defined as: 0 = no pain; 1–3 = mild pain; 4–6 = moderate pain; 7–9 = severe pain; 10 = unbearable pain.

Results

All patients reported initial pain relief within one hour of application, including one patient who reported nearly immediate relief within three minutes. Three patients reported nearly complete relief of pain (rated 0–3), and the remainder reported pain levels of 4 or less. The pain relief lasted between 18 hours to 30 hours. Many patients also reported that nighttime application of the SSO skin patch gave the added benefit of more restful sleep.

Table 1 Summary of patient responses to soap-scented oil skin patch treatment

Patient	Age (years)	Duration of fibromyalgia (years)	Length of time until maximum relief achieved following patch application	Headache	Pre-treatment pain rating	Post-treatment pain rating
1	56	12	40 minutes	No	8–10	2–3
2	48	2.5	1 hour	Yes	8–10	0–3
3	67	45	20 minutes	No	9–10	1–3
4	50	20	1–2 hours	No	7–8	2–3
5	54	9	1–2 hours	No	10	0–2
6	50	5	2 hours	Yes	7–8	2–3
7	58	15	3 hours	Yes	7	3
8	43	5	30 minutes	Yes	8–9	1–2
9	56	23	3 minutes	Yes	9	1
10	69	26	1–2 hours	No	10	0–2
11	48	12	1–3 hours	Yes	10	1–2
12	62	15	1 hour	Yes	8–9	4
13	51	5	20 minutes	No	10	1–3
14	53	8	1 hour	No	8–9	1–2

Seven patients studied also suffered from headaches and reported symptomatic relief within an hour when the SSO skin patch was applied to the back of the neck.

All patients were able to use the SSO skin patches without notable side effects.

Case report 1

The patient is a 56-year-old female with an 11-year history of fibromyalgia. She described numerous, widespread tender points along her upper arms, shoulders and back, and her condition has diminished her quality of life. She has received treatment from her primary care physician, rheumatologist, psychiatrist, physical therapist and chiropractor. As a sleep aid, she was taking duloxetine hydrochloride (Cymbalta) 20 mg and amitriptyline (Elavil) 25 mg.

After application of the SSO skin patch, the patient reported a pain score decrease from 8–10 to 2–3.

Case report 2

The patient is a 48-year-old female artist who has suffered from fibromyalgia for nearly three years. She also reports headaches, up to three times a week, and has discontinued all medications, citing their inefficacy. Unable to participate in social activities and enjoy her art, her severe pain (rated as high as 10) also left her with a resultant depression.

After application of the SSO skin patch, she reported satisfactory pain relief (rated 1–3) of both fibromyalgia and headache, as well as improved quality of life.

Case report 3

The patient is a 67-year-old female with a 45-year history of fibromyalgia. She spent most of her time indoors, usually in bed, due to her intense pain (rated 9–10). She also reports difficulty sleeping, in spite of pharmacological sleeping aids.

Within 20 minutes of SSO skin patch application, she reported nearly complete pain relief (rated 1–3) and improved quality of life.

Discussion

It was found that the SSO skin patch consistently and adequately relieved muscular pain. However, SSO is not a topical analgesic, and has been tested on various painful medical conditions (such as rotator cuff injuries) without success. The SSO skin patch has been successful in relieving painful, spasmodic conditions (including those associated with smooth muscle) such as those that have been previously described. I have theorized that SSO relieves pain by relaxing the underlying muscle spasm.

Due to its seemingly preferential action in the relief of muscular pain, I investigated the application of the SSO skin patch for relief of pain associated with fibromyalgia. Patients reported a significant decrease in their pain rating within one hour of application.

For relief of headaches, patients were instructed to apply the SSO skin patch directly to the back of the neck upon onset of pain. Headaches were consistently relieved within one hour. Similar results were not achieved with application of the patch to other areas of the head or neck, including the frontal and temporal regions.

It is of interest that previous trials with the SSO skin patch to relieve headaches in patients without concomitant fibromyalgia have been unsuccessful. This suggests that headaches associated with fibromyalgia may have a different pathophysiology than those of patients without fibromyalgia.

Many topical analgesic patches have strong scents. However, it is unclear whether these scents contribute to the pain-relieving properties of the medications, or are simply an inherent chemical characteristic. Scents are already used in alternative medicine, and applications such as aromatherapy have become increasingly popular, however, any medicinal benefits remain undocumented (Cook and Ernst 2000).

I hypothesize that the active ingredient in the SSO skin patch is the scent itself. This would represent a new and unique method of medicinal delivery, because the scent is seemingly absorbed through the skin and not via the olfactory system.

From these results, I conclude that the SSO skin patch is a safe and effective topical treatment for the pain of fibromyalgia.

Acknowledgments

I have applied for United States and international patents for the soap-scented oil skin patch.

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