An Investigation Into the Frequency of Use of Traditional and Complementary Medicine in Patients Presenting to the Dermatology Clinic: A Survey Study

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ABSTRACT

Background: Although interest in traditional and complementary medicine (TCM) methods has grown, patients are still reluctant to inform physicians that they employ these. Reasons for the increase in the frequency of TCM methods include interventional procedures being performed less or not at all, and the perception that topical treatment is harmless. The great majority of people who use TCM methods acquire the relevant information from the internet and those around them. Physicians therefore need to be aware of such trends and to protect patients against incorrect use by informing them accordingly. The purpose of this study was to investigate the frequency of the use of TCM methods among patients presenting to the dermatology clinic.

Materials and Methods: Patients presenting to the dermatology clinic between June 2018-April 2019, aged over 15, and with symptoms persisting for longer than six weeks was included in the study. Disoriented or uncooperative patients were excluded. Patients agreeing to participate read and signed informed consent forms, after which a question and answer type questionnaire was administered to collect data about TCM applications.

Results: Six hundred fifty-one patients, 56.9% of whom were women, took part, and 13.3% had used TCM. Herbal remedies were the most frequently employed method at 67.8%, followed by cupping at 16%, leeches at 13.7%, and moxibustion at 2.2%. Frequency of use was 48.2% among women and 51.8% among men, while in terms of age the frequency was highest in the 45-55 age range, and in terms of education use was highest among university graduates.

Conclusion: Patients attending for examination should be given information to protect against misuse of TCM methods by inquiring into their attitudes toward them, especially those failing to benefit from the treatment administered or with recurring symptoms. Physicians must be aware of such tendencies on the part of patients and must inform patients about these methods when necessary.

Keywords: Traditional treatment, Complementary treatment, Dermatology

Introduction

Modern/conventional medicine was born from Hippocrates' (460-356 BC) idea of investigating the cause and effect relationship during diagnosis, treatment, and prognosis through accumulated experiences. Freed from being a combination of religious faith, magic, and methods based on empirical treatment applied by priest-physicians, the foundations were laid for it to become a true science [1]. When assistant methods are applied in addition to modern medicine, this is known as ‘complementary medicine,’ while the use of such techniques instead of modern medicine is known as “alternative medicine.” Based on World Health Organization definitions, the term ‘traditional and complementary medicine (TCM)’ decision that from there is no alternative to
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medicine, only to treatment could be an alternative [2]. TCM refers to the totality of skills and practices, explicable or otherwise, based on theories, beliefs, and experiences specific to different cultures in the preservation of health in addition to protecting against, diagnosing, and healing or treating physical and mental diseases [3]. Fifteen forms of TCM are currently approved by the Turkish Ministry of Health - phytotherapy, mesotherapy, larval therapy, prolotherapy, cupping, music therapy, hypnotherapy, homeopathy, leech therapy, ozone therapy, osteopathy, reflexology, acupuncture, apitherapy, and chiropractic [2]. Diseases have been present throughout human history, and there has been a constant search for treatments. The search for a solution outside evidence-based medicine on the part of the patient or relative, the knowledge that the disease in question may persist for a lifetime, recurrence of symptoms after treatment, and the belief that natural compounds have no side-effects all encourage the use of TCM [4]. Reasons for use vary among countries depending on their level of development. In developing countries, TCM is used to meet the basic health needs of communities, while in developed countries it is more used in diseases to which conventional medicine fails to find a solution [5]. Previous studies have investigated the use of TCM among patients presenting to dermatology clinics in countries with very different sociocultural characteristics, such as Singapore [6], the USA [7], the United Kingdom [8], Taiwan [9], Saudi Arabia [10], and Iran [11]. The common finding of these studies is that TCM is commonly employed among patients presenting to dermatology clinics, that patients are reluctant to report this, and that dermatologists therefore need to raise their awareness on the subject of TCM. However, the number of studies from Turkey investigating the frequency of use of TCM in the field of dermatology, the methods employed, and the frequency of their side-effects and effectiveness, is insufficient.

The purpose of this study was to investigate the use of TCM among patients with dermatological symptoms persisting for longer than six weeks presenting to a dermatology clinic in Turkey.

Materials and Methods

Patients presenting to the dermatology clinic between June 2018 and April 2019, aged over 15, and with symptoms persisting for longer than six weeks, and patients attending routine clinical follow-ups were included in the study. Disoriented or uncooperative patients were excluded. All patients meeting the inclusion/exclusion criteria were invited to take part. Patients agreeing to participate read and signed informed consent forms, after which a question and answer type structured questionnaire (Appendix 1) was administered to collect data about TCM applications.

Approval for the study was granted by the Duzce University Ethical Committee (no: 2019/109).

Statistical Analysis

Statistical analysis was performed on Statistical Package for the Social Sciences Software (Windows 20.0; SPSS Inc., IL, USA). Descriptive statistics were calculated as frequency and percentage for categorical variables.

Results

Demographic data for the patients in the study are shown in Table 1, and distributions of TCM use among patients using TCM are shown by age, sex, and education level in Table 2.

In Table 3, TCM was employed by 13.3% of the patients in the study. The most popular TCM method, at 67.8%, was herbal products. Cupping was used by 16% of patients, leech therapy by 13.7%, and moxibustion by 2.2%.
Three of the seven patients with psoriasis used leech therapy, and four used cupping.

The seven patients with chronic pruritus and chronic urticaria applied cupping.

Two of the patients with zona zoster-related post-herpetic neuralgia employed cupping, one employed leech therapy, and two used moxibustion.

Two patients with acne rosacea employed leech therapy, but reported an increase in their symptoms. Three out of four patients with androgenic alopecia used leech therapy, and one employed cupping.

Three patients with venous ulcer employed leech therapy, with healing accelerating in one of these, and other reporting partial improvement. Fifty-nine patients with existing diagnoses of chronic
eczema and psoriasis reported employing creams made from various herbal compounds.

In terms of side-effects, cupping-related scarring was determined in one patient, worsening of lesions after cupping in three patients, allergic contact dermatitis associated with creams applied in two patients, cheloid in leech bite points in one patient, and allergic reaction after cupping in three patients in Table 3.

Discussion

As in the rest of the world, procedures described as TCM began being increasingly employed in Turkey after the 1990s. However, 60-80% of patients using TCM methods are reported to conceal this from their physicians [12]. Reported TCM use rates among patients presenting to dermatology clinics are 25.7% in Singapore [6], 45% in the United Kingdom [8], 41% in Taiwan [9], 40% in Saudi Arabia [10], and 31.3% in Ireland [11].

In their study of 1.610 patients from eastern Turkey, Bilgili et al. [13] determined that 43.7% used at least one TCM method, particularly henna, cologne, prayer, and herbal remedies. Can et al. [14] reported TCM use among 26.1% of pediatric patients, most commonly herbal remedies, and that the father being a university graduate increased the use rate. In a study of 217 patients, Sivamani et al. [15] found that 13.4% used TCM, the most common method again being herbal remedies. A review of 58 studies from 19 countries reported that TCM use rates ranged between 8% and 48.5%, and concluded that homeopathy was more common in Germany, the United Kingdom, and Canada, while the use of herbal remedies was more frequent in Germany, Turkey and Brazil [16].

The TCM use rate in the present study was 13.3%, the most commonly employed method being herbal remedies at 67.8%. The highest rate of use was among university graduates at 17.9% (n=38). No patients in this study used acupuncture for dermatological diseases.

The second most commonly applied TCM method after herbal remedies was cupping, at 16%. Patients with psoriasis, chronic pruritus, chronic urticaria, post-herpetic neuralgia, and androgenic alopecia had cupping performed. Cupping is a traditional therapy that has been performed for thousands of years across the world [17]. There are two forms of cupping - dry and wet. It is defined as eliminating 'stagnant blood' from the body [5]. Studies have investigated its use in various medical conditions, including dermatological applications. Despite the absence of high-quality clinical studies evaluating the effectiveness of cupping therapy, it is widely employed worldwide [17]. Several studies have discussed inappropriate applications resulting in various complications [18]. A review of 12 randomized controlled studies involving 842 patients with urticia reported that wet cupping might be capable of enhancing the efficacy of antihistaminic therapy. However, that review also reported that the need for attention in the results of studies regarding cupping since they might be poor quality [19]. A meta-analysis of studies involving the application of cupping in patients with psoriasis concluded that it was not effective in treating the [20]. Paradoxically, there are numerous cases in the literature of the Koebner phenomenon developing in association with cupping [21,22]. Tian et al. [23] found that wet cupping exhibited its effect by reducing substance P levels in patients with post-herpetic neuralgia. Another study also reported that cupping was effective in shingles-related post-herpetic neuralgia [24]. The most commonly encountered side-effects of cupping include anemia due to excessive bleeding [25,26] and herpes virus infection [27]. Later changes include scarring in the incision site and hyperpigmentation [28]. Histories revealed exacerbation of lesions occurred following cupping in patients diagnosed with psoriasis in this study, partial improvement in one patient with chronic pruritus and post-herpetic neuralgia, and to no therapeutic effectiveness in other patients taking part.

Leech therapy was employed by 13.7% of the patients in this study. The treatment of medical problems using medical leeches is known as hirudotherapy. Leeches feed on the blood of the organism to which they attach themselves. Anesthetic substances in leech secretions reduce pain, while their anticoagulant properties prevent clotting. The effects of leech therapy are thought to be due to the secretions containing hirudin, hyaluronidase, kaline, destbilase, aspirase, eglin, bdellin, dekorsin, guamerin, piguamerin, gelin, gamma-glutamyl transeptidase, platelet-activating factor antagonist, ornithine-rich plasma, and other active biomolecules [29]. The US Food and Drug Administration approved the use of medical leeches in the healing of graft tissue and problems associated with venous congestion in 2004 [30]. Cases have been reported of successful use of leech application in healing chronic wounds [30,31] and venous congestion [32]. In an analysis of case reports and case series collected from 67 different article, Whitaker et al. [33] reported that leech application assisted flap rescue in 216 patients undergoing flap surgery. In addition to the proven efficacy of leech therapy, Aktaş and Hamidi [34] reported a different case, of a patient treated on an outpatient basis for warts recalcitrant to treatment persisting for seven years. Those authors reported that shrinkage occurred followed leech therapy applied by the patient. Two patients with rosea in this study underwent leech therapy, but reported a worsening in their symptoms. Three patients with venous ulcers had leech therapy performed, with one reporting accelerated healing and another partial improvement. Patients with existing psoriasis reported no effectiveness of leech therapy, and one reported increased pruritus as a side-effect. The most commonly reported side-effect of leech application is infection, at a rate of 21.8%. Infections arise from the leech's microbiota
Bauters et al. [35] determined an infection rate of 27.5% and recommended the prophylactic use of levofloxacin. One rare side-effect is pseudolymphoma [36,37,38]. Another side-effect that may be seen is allergic reaction [39]. Hemoglobin should be monitored due to continuous blood loss for several hours during and after leech therapy, and transfusion must be performed if necessary [33]. Three patients presented to our clinic due to development of allergy (Figure 1) following leech therapy. One patient also presented due to cheloid after leech therapy. A patient with existing venous congestion and chronic venous ulcer reported benefitting after leech application. Leech applications can be employed for wound healing due to their prophylactic and palliative effects. However, standard procedures and scientific parameters need to be developed if the effectiveness of leech application is to be proved in a rational manner.

Herbal remedies were the most commonly used TCM method in this study. These have been used in the treatment of dermatological diseases for hundreds of years [40]. The use of natural herbal compounds has become increasingly popular in recent years [41]. Recent research from the USA has determined use of a herbal product among 20-60% of adolescents and in 70% of individuals between 30 and 40. Men frequently use these for therapeutic purposes, while women more often employ them for cosmetic reasons [41]. In a study from Iran, Dastgheib et al. [11] reported that 31.3% (n=188) of 600 patients used TCM. The great majority of these patients, 89.9%, favored herbal products. The majority of patients using herbal remedies were also in the eczema group. According to the World Health Organization, some 35,000-70,000 plants worldwide are used for therapeutic purposes, of which only 5,000 have been subjected to medical analysis [42]. These products, generally inaccurately described as herbal medicines, are propagated by physicians and non-physicians based on reports with no supporting scientific evidence, and are sold in places where they are easily accessible to all. Although patients are reluctant to admit to using these products, they employ them in an uncontrolled manner out of the belief that ‘natural products are harmless.’ Worsening of lesions was observed in a patient receiving biological therapy and under follow-up by ourselves. When asked about this, the patient stated that she had purchased a product containing seaweed online, had rubbed it on her body and left it there for six h, and that the symptoms had subsequently worsened within one week.

**Study Limitation**

The number of patients is limited in terms of survey study.

**Conclusion**

TCM enjoys a wider range of use than physicians may expect. Patients are largely advised to use TCM by non-professionals. They are also reluctant to consult physicians to obtain information about the applications they are considering using. They use the internet, the media, and friends and relatives as sources of information, for which reason TCM usage rates are rising. Patients should be asked about the use of TCM when an otherwise unexplained worsening in lesions is detected. At the same time, it should always be remembered that the TCM methods employed may interact with conventional medications.

**Ethics**

**Ethics Committee Approval:** The study was conducted in the light of the declaration of Helsinki and followed a protocol approved by Duzce University Ethical Committee (approval number: 2019/109).

**Informed Consent:** Patients were recruited in the study after being given informed consent.

**Peer-review:** Internally peer-reviewed.

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![Figure 1. Erythematous papules in leech biting areas](image-url)
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### Appendix 1. Traditional and complementary medicine method use questionnaire for patients with chronic dermatological diseases

**Age:**

**Sex:**
- [ ] Male
- [ ] Female

**Education:**
- [ ] Illiterate
- [ ] Literate
- [ ] Elementary school
- [ ] Middle school
- [ ] High school
- [ ] University and above

**Diagnosis:**

**Duration of disease:**
- [ ] 5 years
- [ ] 5-10 years
- [ ] > 10 years

**Additional chronic disease:**
- [ ] Yes
- [ ] No

**Use of TCM:**
- [ ] Yes
- [ ] No

**Which TCM methods do you use?:**
- [ ] Herbal products (as ointment)
- [ ] Aromatherapy (oils)
- [ ] Acupuncture
- [ ] Cupping
- [ ] Leech therapy
- [ ] Moxibustion
- [ ] Other

**Reason for use of TCM methods:**
- [ ] Relief
- [ ] Support
- [ ] Treatment
- [ ] Protection against attacks

**Symptoms requiring use of TCM methods:**
- [ ] Itching
- [ ] Rash
- [ ] Pain
- [ ] Dissatisfaction with external appearance

**Benefit obtained from TCM methods?**
- [ ] Yes
- [ ] No

**If benefit was achieved, which symptoms improved?**
- [ ] Itching
- [ ] Rash
- [ ] Pain
- [ ] Dissatisfaction with external appearance

**Did you receive treatment alongside TCM?**
- [ ] Yes
- [ ] No

**Receipt of information about the TCM method concerned prior to application?**
- [ ] Yes
- [ ] No

**Was information requested from a physician?**
- [ ] Yes
- [ ] No

**Did you obtain information from the internet?**
- [ ] Yes
- [ ] No

**Did the TCM method cause any side-effects?**
- [ ] Yes, if so which
- [ ] No

**If you employed TCM, would you use it again?**
- [ ] Yes
- [ ] No