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Efficacy of Turmeric Bath on Psoriasis - A Case Report

Dr. Vasanthkumar SR

BNYS MD (Clinical naturopathy) Assistant Professor, Rajashekaraih Institute of Naturopathy and Yogic Sciences

Abstract: ***Introduction: Psoriasis, a prevalent autoimmune skin condition, is distinguished by the excessive growth of keratinocytes due to T cell-mediated hyperproliferation. This disease exhibits a robust yet intricate genetic foundation, as evidenced by a concordance rate of around 60% in monozygotic twins. Recent studies on linkage and high resolution association further highlight the significance of HLA-Cw*0602 as a prominent susceptibility allele for psoriasis. Aim: To evaluate the effect of Ganji turmeric bath in the management of psoriasis. Materials and methods: The subject approached MRR nature treatments with symptoms of itching and redness and patchy skin, since 8 months. Results: The subjects showed marked improvement as depicted in the photographs taken at before and after treatment. Discussion: Turmeric has been proven to be highly effective in treating a variety of medical conditions. Its benefits range from enhancing overall health to serving as a crucial component in the treatment of certain types of cancer and skin diseases.***

Keywords: turmeric, Psoriasis, skin, keratinocytes

1. Introduction

Psoriasis is a persistent inflammatory dermatological condition distinguished by clearly demarcated erythematous plaques accompanied by whitish scales. (1.2) Psoriasis stands as a prevailing chronic inflammatory dermatological condition, with its prevalence varying across nations, while its onset can manifest at any stage of life. (3) The proposition is made that psoriasis onset is influenced by ethnicity, genetic composition, and environmental elements. A noteworthy contribution to the pathogenesis of psoriasis is made by genetic factors, particularly Psoriasis Susceptibility 1 (PSORS1), situated within a roughly 220 kb segment of the major histocompatibility complex on chromosome 6p21, serving as a significant susceptibility locus for psoriasis. (4)

In individuals afflicted with psoriasis, the manifestation of cutaneous lesions in unaffected regions subsequent to diverse injuries is recognized as the Koebner phenomenon. It has been documented that radiotherapy, ultraviolet (UV) B exposure, and even minimal skin irritation can incite the emergence of fresh psoriatic lesions. (5) The pathogenesis of the Koebner phenomenon may be influenced by factors such as the type, site, depth, and degree of trauma. (6) The pathogenesis of the Koebner phenomenon may be influenced by factors such as the type, site, depth, and degree of trauma. (7) Following a cutaneous injury, keratinocyte proliferation and the increased expression of NGF in basal keratinocytes occur early in the development of a psoriasis lesion, preceding the infiltration of T lymphocytes into the epidermis. (8)

Furthermore, it has been observed that psoriatic keratinocytes secrete NGF in higher amounts, indicating its crucial involvement in the development of psoriasis. This research highlights the functional activity of N GF and its receptor system in the initial stages of psoriatic lesions. Additionally, psoriasis is one of the autoimmune inflammatory skin diseases that are mediated by resident memory T cells (TRM), a subset of non-circulating memory T cells that persist in peripheral tissues for an extended period. (8)

Turmeric, a perennial herbaceous plant belonging to the ginger family (Zingiberaceae), is widely grown in Asia, particularly in India and China. With its probable origins in India, turmeric has been utilized in Indian culture for over 2500 years. This versatile plant thrives in tropical and subtropical regions across the globe. Although the exact origin remains uncertain, it is believed to have originated from southeastern Asia, predominantly India. The cultivation of turmeric spans across all regions of India (Kapoor, 2000). (9)

Turmeric, a plant that does not bear seeds, is sterile. It can reach a height of 3-5 ft and has flowers that are dull yellow in color. The rhizome, which is an underground stem, is thick and fleshy and is surrounded by the bases of old leaves. This rhizome possesses medicinal properties. To create the vibrant yellow spice, the rhizomes are boiled, dried, and ground. Turmeric powder has a distinctive taste that is both peppery and bitter, with a subtle fragrance that is reminiscent of orange and ginger. In addition to its culinary applications, turmeric has been extensively utilized in traditional Indian medicine. because of its several beneficial properties (Chattopadhyay et al., 2004) (10)

The turmeric plant has been highly regarded by traditional Ayurvedics for its natural antiseptic, disinfectant, anti-inflammatory, and analgesic properties. Additionally, it has been commonly utilized to aid digestion, improve intestinal flora, and treat skin irritations. In South Asia, it has also been recognized as a readily available antiseptic for cuts, burns, and bruises. Folk medicine reports several other beneficial properties of the plant, and its rhizome is extensively used in Ayurveda and traditional medicine. The comprehensive examination of the literature uncovered that Curcuma turmeric is widely recognized as a universal remedy in herbal medicine, possessing a broad range of pharmacological properties (Nasri et al., 2014). (11)

Biochemical content (Niranjan et al., 2003)-in dried turmeric rhizomes Curcumin 3.1-3.4%. Anthocyanins 18.9-37.0 g/g " Phenols 0.15-0.62% " Tannins 0.32-0.76% " Protein content 3.6-6.8% " Sugars 20.5-43.4% " Oil 3.7-5.3% " Ash 6.9-9.8% " Moisture 90.2-91.3%

Objectives

1) To understand the pathophysiology of psoriasis.
2) To find a better naturopathic approach (turmeric bath) in psoriasis.

Case report Age-48yrs
Gender - Male
Religion-Hindu
Occupation - agriculture
Socio economic status - Middle class
Chief complaints-Scaly offensive eruption on scalp and lower back since 2 months.
Associated complaints - mild back pain since 1 month

History of present illness - patient was apparently normal 2 months back and gradually noticed to have scaly offensive eruption on scalp and lower back. Initially and later spread completely to back, both arms, thighs and legs. Associated with mild lower back pain since 1 month. The symptoms aggravates in the evening with intense itching and mild pain. And relived after taking anti-histamine medications. For better management he approached our hospital.

History of past illness
The subject is not a known case of Diabetes mellitus, Hypertension or any other systemic illness.

Personal history
Diet: Mixed
Appetite: Good
Thirst: Normal (2.5 litres of water/day)
Sleep: Sound sleep
Bowel: Regular
Micturition: Normal in frequency
Addiction: Nil
Habits: alcohol occasionally, beetle nut chewing
Allergy: nil

General Physical Examination Built: moderately built

Nourishment: well nourished
Height: 168 cm
Weight: 78kg
BMI: **32.9 kg/ m2 (Grade 1) Pallor**: **absent**
Icterus: absent
Cyanosis: absent
Lymphadenopathy-absent
Clubbing: absent
Oedema-absent

Vitals were normal.

Respiratory system, Cardiovascular system, Gastrointestinal system, Central nervous system and Musculoskeletal system has shown no abnormality**.**

Local examination Inspection of skin Colour: Greyish white.
Size: Varying.
Consistency: Seem to be hard.
Configuration: Irregular.
Margination: Ill-defined
Surface: Dry scales.
Palpitation: Rough, Thick, Dry surface.

2. Analysis and Evaluation of Symptoms

Physical Particulars

1) Scaly offensive eruption on both lower limbs, upper limbs and scalp.
2) Aching type of pain in low back. <-lifting weight, Stooping. >-lying flat.

Treatment adopted
Ganji and turmeric pack applied to the whole body given once in day every morning for 15 days

Assessment Criteria For pain

For pain

Visual Analogue Scale [12]

- 0-None
- 1 to 3-Mild
- 4 to 6-Moderate
- 7 to10-Severe Before treatment

After 15 days of treatment

3. Discussion

Turmeric possesses various beneficial properties such as anti-inflammatory, antioxidant, anticarcinogenic, antiviral, and antimicrobial effects. Additionally, it holds potential therapeutic properties that offer advantages in our daily lives. For instance, it is utilized as an antiseptic for disinfecting burns and cuts. Moreover, it helps regulate insulin levels, thereby exhibiting antidiabetic, antiapoptotic, antiangiogenic, and immunomodulatory properties. supports liver detoxification and fat metabolism, boosts the immune system, and promotes wound healing. (13) Studies have demonstrated the efficacy of curcumin as a potent eliminator of oxygen free radicals. Similar to vitamins C and E, it possesses antioxidant properties that safeguard against lipid or hemoglobin oxidation. Notably, curcumin effectively hinders the production of reactive oxygen species (ROS) like H2O2, superoxide anions, and nitrite radicals by activated macrophages. Turmeric and curcumin have been found to have the ability to suppress the activity of many common mutagens and carcinogens. This is due to their direct antioxidant and free-radical scavenging effects, as well as their ability to indirectly increase glutathione levels. These properties have been linked to the anticarcinogenic effects of turmeric and curcumin, which aid in hepatic detoxification of mutagens and carcinogens while inhibiting nitrosamine production. Additionally, curcumin has been shown to inhibit the mutagenic induction effect of UV rays. (14). In laboratory studies, turmeric extract has been shown to be effective in suppressing inflammation and protecting epidermal cells from ultraviolet B-radiation damage.

4. Conclusion

Curcumin possesses immense potential as a therapeutic agent for a range of inflammatory disorders and canc er variants. This has led to a surge of interest in its therapeutic capabilities, as evidenced by the numerous phase II and III clinical trials currently underway. However, the primary challenge in utilizing curcumin as a therapeutic agent has been its restricted systemic bioavailability. Nevertheless, researchers are actively engaged in discovering the most effective mode of application.

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