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THERAPEUTIC EFFECT OF A HERBAL PASTE IN THE TREATMENT OF DA US SADAF (PSORIASIS VULGARIS) - A CASE STUDY

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Abstract: *Da us Sadaf* is an accumulation of *Ghair Tab'ee Sauda* (abnormal atrabilious humour) in the skin causes impaired function. When the *saudavi maaddah* (atrabilious matter) collected in the body, the *Tabi'at* (physis) tries to expel it through the skin, due to the acrid nature of the *ghair tab'ee sauda* and it produces burning sensation, irritation and scaling on the site of the skin. In modern medicine, this condition can be correlated with Psoriasis vulgaris, which is an immunologically mediated, common chronic inflammatory condition. Usually the skin lesions are symmetrical well-defined red plaques with silvery scale, located on extensor aspects of elbow and knees, the scalp and sacrum. It can arise at any age but peak around the 2nd – 3rd decades and affecting the sexes equally. The prevalence is 2– 3% of the general population worldwide. The aim of the study was to evaluate the therapeutic effect of a herbal paste in the treatment of skin lesions in *Da us Sadaf* patient. It was conducted in the outpatient department of National Teaching Hospital of Ayurveda, Borella. This study describes a case of clinically and histopathologically diagnosed 25-year - old male patient. He was treated by an external application of a herbal paste over the lesion daily for 3 months. The results suggested that, the drugs under the trial had shown considerable improvement in the signs and symptoms of *Da us Sadaf* from 3rd week onwards. Hence, it can be concluded that further trials should be done in large samples to evaluate the efficacy and safety of particular medicines in the treatment of *Da us Sadaf.*

Key words: *Da us Sadaf*, Psoriasis vulgaris, quality of life, negative impact, herbal paste.

Introduction

Da us Sadaf (Nasar, MK and Yasmin, 2019) is an accumulation of *Ghair Tab'ee Sauda* (abnormal atrabilious humour) in the skin that hinders the nutrition (Tabasum, H. 2018) and causes impaired function of the skin, i.e. the skin lose its power to remove the *Saudavi maaddaah* (atrabilious matter) from the body. Consequently, the *Tabi'at* tries to expel it through the skin, due to the acrid nature of the *ghair tab'ee sauda* resulting dryness and itching of the skin (Tabasum H. 2018) burning sensation, irritation and scaling on the site of the skin. In modern medicine it can be correlated with Psoriasis vulgaris, which is a chronic condition of autoimmune origin which primarily affects the skin and manifests itself with elevated, symmetrical erythematous plaques on the body (Elena, N. et al,2018). Usually the skin lesions are symmetrical well-defined red plaques with silvery scale, located on extensor aspects of elbow and knees, the scalp and sacrum. It can arise at any age but peak around the 2nd – 3rd decades and affecting the sexes equally (Collier, JAB. et al, 2000). The prevalence is 2– 3% of the general population worldwide (Nasir, A. et al, 2020). The aim of the study was to evaluate the therapeutic effect of a herbal paste in the treatment of skin lesions in *Da us Sadaf* patient.

2. RESEARCH METHODOLOGY

2.1 CASE STUDY

A 25- year-old unmarried male patient who was working in a private company as a labourer suffering from itching and burning sensation along with some thick white scales over the elbows, forearms and legs for 2 years. Scale of the skin frequently shed off while rubbing or itching in these areas and the colour of the skin was changed into dark.

The above said patient was registered and diagnosed as psoriasis in the OPD of NATH, Borella. Then the Patient was treated with a herbal paste. The laboratory investigations, Urine routine and microscopic and complete Haemogram were done. General and local examinations were also performed to evaluate any abnormal findings. Nails were not affected and no joints pain were reported.

2.2 Clinical features

The patient had clinical features on the base line are: Itching, burning sensation, multiple patches with different sizes, scaly skin with marked depression.

2.3 Local Examination

There were symmetrical well-defined red plaques with silvery scaly lesions on extensor aspects of elbows, forearms and legs.

2.4 Drug with mode of administration

The subject was treated by 5gm *Haldhi* (turmeric) powder with 150 ml of milk internally with local application of the research herbal paste over the lesions daily in the morning for 3 months. The subject was advised to apply *Elwa* (*Alove vera* jel) over the lesions whenever he felt dryness and discomfort in the affected areas and instructed to take juice of *Gaajar* (*Daucus carrota*) as *Ghiza* (food).

2.5 Method of preparation of the herbal paste

The herbal Paste consists of *Barg e Neem* (leaves of *Azadirachta indica*), *Moong ki daal* (seeds of *Vigna radiata*) and *Haldi* (rhizome of *Curcuma longa*). Equal quantities of leaves of *Azadirachta indica, seeds of Vigna radiata* and rhizomes of *Curcuma longa* were taken freshly, cleaned, washed thoroughly and then ground them to make a fine paste.

3. RESULTS AND DISCUSSION

The symptoms were measured on day 0, and then every 3 weeks i.e., week 3, 6, 9 and 12; and the patient was under the observation for three months. Then the pre- and post-study effect of the herbal paste was assessed by Psoriasis Area and Severity Index (PASI) (Feldman, SR. Krueger, GG. 2005) and Dermatology Life Quality Index (DLQI) (Finlay, AY. and Khan, GK. 1994); and the effect was found on 3rd week onwards.

Before starting the application of the herbal paste, the PASI score was 19.2 and after the end of the study it was 0.6. The DLQI score also was markedly reduced from extremely large effect on patient's life to small effect on patient's life. i.e., improved quality of life of the patient physically as well as mentally. Further, it was observed that neither there was relapsing eruptions nor flare-up of residue lesions in three months follow up.

Despite the availability of different topical and systemic therapeutic options for the treatment of psoriasis, none of them provides excellent clinical results without the risk of side effects (Di Nardo, V. et al, 2018). Medicinal plants play a key role in preventing various diseases (Fazeenah, AHA. Quamri, MA. 2017). Our study demonstrated a marked reduction of symptoms of psoriasis and increased patient's quality of life by using the herbal paste.

The effect of the herbal paste is due to its chemical constituents. The *Neem* (*Azadirachta indica*) tree has been known as the wonder tree for centuries and it has become important in the global context today for its variety of medicinal uses. Neem extracts have Nimbinin and nimbandiol as active constituents; and is used in dermatitis, eczema, acne, bacterial and fungal infections and other skin disorders due to its effectiveness as a powerful antibiotic, antiviral, anti-fungal, anti- inflammatory and anti-bacterial properties (Bhowmik, D. et al, 2010). Quercetin and ß-sitosterol purified from fresh leaves of Neem were known to have antifungal and antibacterial activities (Alzohairy, MA. 2016). An *in vitro* study on ethanol extract of neem leaves showed antibacterial activity against both *Staphylococcus aureus* and MRSA (Methicillin-resistant Staphylococcus aureus) with greatest zones of inhibition at 100% concentration (Alzohairy, MA. 2016). A double- blind clinical trial was performed to check the efficacy of drug made up of aqueous extract of neem leaves in 50 cases of uncomplicated psoriasis taking conventional coal tar regime and results revealed that patients taking drug in addition to coal tar had shown a quicker and better response in comparison to placebo group (Alzohairy, MA. 2016). Another clinical study was conducted by Morya GCK et al., (2017) to evaluate the effect of *Neem*, *Tulsi* and *Henna* on Psoriasis, showed that the internal use of *Neem* and *Tulsi churna* along with external application of *Neem-Tulsi-Heena* oil combined therapy exhibited better result.

Haldi (*Curcuma longa*), commonly called as Turmeric, which is extensively used as a spice, food, preservative and traditional medicine as a household remedy for various diseases. Curcumin, is a major component of turmeric with immune-modulating, anti-inflammatory, wound-healing, antibacterial, anti-tumour, anti-carcinogenic, and antioxidant properties (Sarafian, G. et al, 2015). Recently it has been proposed for the treatment of psoriasis (Di Nardo, V. et al, 2018). Studies showed that the locally administered curcumin gel led to a significant improvement in the degree of cutaneous involvement from both a clinically as well as histologically in decrease in skin thickness, keratinocyte proliferation, erythema and degree of dermal neutrophil inflammation (Elena, N. et al, 2018). **Sajid Ali et al, (2012)** carried out a study on human subjects showed a significant decrease in PASI Score and Physicians Global Assessment score, exhibited an improvement in cutaneous lesion evolution. Another study revealed that the decreased levels of Phosphorylase kinase (PhK) in samples of psoriatic plaques treated with curcumin 1% alcoholic gel was associated with decreased keratinocyte transferrin receptor (TRR) expression, severity of parakeratosis, and density of epidermal CD8+ T cells suggest that agents capable to inhibit PhK activity, could be considered suitable candidates the topical treatment of psoriasis (Vollono, L. et al, 2019).

Moong ki daal (Vigna radiata L.) is well-known as Mung bean or green gram, which has been consumed as a common traditional food worldwide for more than 3500 years; and it has recognized for its high nutritive value (Ganesan, K. and Xu, B. 2018), especially it composed of about 20%– 24% protein (Tang, D. et al, 2014). In the traditional medical system, it is well known for its detoxification properties and is used to alleviate heat stroke, reduce swelling during the summer and beneficial in moisturization of the skin (Ganesan, K. and Xu, B. 2018). The paste of Mung bean has been used to treat acne, eczema, dermatitis and relieving itchiness (Liu, T. et al, 2014), due to its antioxidant, antimicrobial, and anti-inflammatory, antidiabetic, antihypertensive, lipid metabolism accommodation, and antitumor effects (Tang, D. et al, 2014). Studies shows that the ethanol extract had great potential to improve the clinical symptoms of inflammation-associated diseases, such as allergies (Bellik, Y. et al, 2012). Studies reported that methanolic extract contains anti- inflammatory activity (Pandey, S. 2019). Another study was conducted to evaluate the effects of trypsin inhibitors from mung beans (i.e., LysGP33) on the metastasis and proliferation of human colon cancer cells (SW480 cells) were detected using wound healing assays (Zhao, YR. et al, 2012).

4. CONCLUSION

A 3 months treatment with herbal paste of leaves of *Azadirachta indica*, seeds of *Vigna radiata* and rhizome of *Curcuma longa* as local application over the psoriatic lesions was proved to be markedly effective as it resulted in reduction of PASI score and improved quality of life of the patient without any adverse effects. Though, further studies are recommended with large sample, multi centered and modified methodology to detect the mode of action of the drugs used as well as to find out the main causes. However, it is concluded that this fine herbal paste can be used as local application in the treatment of psoriasis.

5. ACKNOWLEDGMENT

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6. CONFLICT OF INTERESTS

The authors declare that there is no conflict of interests regarding the publication of this paper.

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