

Case Report

Effect of Yoga and Naturopathy intervention on atopic dermatitis: A clinical trial

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ABSTRACT

Background: Atopic dermatitis (eczema) is a common chronic or recurrent inflammatory skin disease affects 15–20% of children and 1–3% of adults worldwide. It is characterized by acute flare-ups of eczematous pruritic lesions over dry skin. Yoga and Naturopathy is a safe and cost-effective non pharmacological system which encompassing holistic approach in the prevention and treatment of diseases that is widely used to treat atopic dermatitis. **Methods:** Various bibliographic databases of previously published peer-reviewed research papers were explored and systematic data culminated in terms of various treatment strategies used for the management of Atopic Dermatitis. The prime focus is given towards system of Yoga and Naturopathy management. **Results:** A comprehensive review of 15 papers, including both research and review articles, was carried out to make the article readily understandable. The uniqueness, procedure, advantages of Yoga & Naturopathy interventions are discussed in detail. Results showed improvements in EASI and SCORAD scores. This shows the effectiveness of 4 weeks of YN interventions in reducing the severity of Atopic dermatitis. **Conclusion:** Although there are many modern and alternative treatment strategies available to treat Atopic Dermatitis the Yoga & Naturopathy system have been utilized and found effective; however, their stability and safety become the major impediments towards their successful positioning. This case report suggests that integrated yoga and naturopathy interventions have significant role in managing symptoms of patients with Atopic dermatitis.

Key words: Atopic dermatitis (AD), Yoga and Naturopathy (YN), EASI, SCORAD score.

Atopic dermatitis is a common chronic or recurrent inflammatory skin disease which affects 15–20% of children and 1–3% of adults worldwide. It is characterized by acute flare-ups of eczematous pruritic lesions over dry skin [1] Symptoms of AD include patches of skin that are red or brownish, dry, cracked or scaly skin and itchy skin, especially at night. In infants, eczema usually appears as tiny bumps on the cheeks, while older children and adults often experience rashes on the knees or elbows (often in the folds of the joints), on the backs of the hands or on the scalp [1].

A higher prevalence of 24.2% has been reported recently from Asian country. Adult onset AD has a broad range of age at the onset with a peak at 20-40 years of age as reported

by most studies with a female preponderance. However, AD can have an onset as late as after the fifth decade, called the senile onset AD wherein a male preponderance was observed [2]. The characteristic manifestation of adult onset AD is inflammatory eczema with lichenification, affecting the flexures and extensors, hands, shoulders, neck, face and eyelids. The head and neck distribution are more common in adults with AD than in children with AD. Nevertheless, head and neck dermatitis as manifestation of AD more commonly occurred in adults, even in the absence of childhood eczema, indicating it to be a characteristic feature of adult onset AD [2]. Conventionally systemic corticosteroids should be reserved for use in patients with severe treatment-resistant AD. Oral corticosteroids improve the lesions of AD, but a disease flare or rebound phenomenon usually occurs when systemic corticosteroids are stopped. This may lead to serious side effects [3].

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YN is a safe and cost-effective non pharmacological remedy encompassing holistic approach in the prevention and treatment of diseases that is widely used to treat atopic dermatitis with Yoga techniques and Naturopathy modalities such as Hydrotherapy, Mud therapy, Herbal packs etc.,

CASE REPORT

A 62 years old female visited outpatient department of government yoga and naturopathy medical college and hospital on 26.12.2022 with complaints of itching & dryness around both eyes since 2021. on clinical inspection we noted there was dry cracked skin around both eyes along with swelling and itching around the corner of both eyes (lateral sides) and also darkening of the skin around the eyes noted and there was complaint of inability to get sound sleep. During the acute stage of disease itching was intolerable for which she had consulted on dermatologist and diagnosed with atopic dermatitis in 2021. She underwent allopathic medication for the period of 8 months from June to January (2021) and she discontinued. After that she underwent Ayurveda treatment for 4 months from May to august 2021. After that she discontinued the Ayurveda medication also. Later she came for yoga and naturopathy treatment, prognosis was noted and reported.

MATERIALS AND METHODS

The recommended outcomes assessments for the signs of AD were the Eczema Area and Severity Index (EASI), followed by Scoring AD (SCORAD), on demonstration of validity, good intra- and inter-rater reliability, etc. [4] In addition Weight, Height, Blood pressure, Pulse rate were also assessed at baseline & also post intervention. This case report was aimed to explore the effectiveness of yoga and naturopathy interventions on reducing the severity of atopic dermatitis symptoms & improving the quality of sleep.

Erythema, excoriation, swelling, lichenification on 4 body sites, range: 0-72

Score: Clear – 0, Almost clear – 0.1-1.0, Mild – 1.1-7.0, Moderate – 7.1-21.0, Severe – 21.1- 60.0, very severe- 50.72.0 [4]

SCORAD (6 signs)

Erythema, excoriation, swelling, oozing/crusting, lichenification, dryness on 8 body sites, pruritus and sleeplessness; range: 0-103

Score: Mild - <25, Moderate – 25 -50, Severe - >50 [4]

DAY- 1



DAY-15

DAY-30



Figure 1: Clinical image at various time interval before and after intervention.

Table 1: Intervention Details

| | Therapy | No. of Session | Duration |
|------------------------------------|--|--|----------|
| Hydro therapy | Neem water enema | Weekly once for 4 weeks | 10 mins |
| Mud therapy | Mud pack to eyes & abdomen | Alternate days followed for 4 weeks | 20 mins |
| Herbal pack (mix dry powder paste) | 1. acalypha indica / kupaimeni (20g) | Applied around eyes for alternate days Followed for 4 weeks | 15 mins |
| | 2. azadirachta indica / neem (10g) | | |
| | 3. cynodon dactylon / bermoda grass (10g) | | |
| | 4. Curcuma longa / turmeric (10g) | | |
| Yoga therapy | Hand's in & out breathing | 30 days Followed for 4 weeks | 1 mins |
| | Hand stretch breathing | | 1 mins |
| | Trataka [eye exercise] | | 10 mins |
| | Bhramari pranayama | | 1 mins |
| | Drt / sectional breathing | | 20 mins |
| Acupunture | Auriculo point (allergy area) | Weekly thrice Followed for 4 weeks | 20 mins |
| | Acupuncture points used: | | |
| | In head: du.20, ex.1, ex.6 In upper limb (bilateral) h.7, lu.5, li.4 In lower limbs (bilateral) sp 6, sp 9, sp 10, st 36 | | |

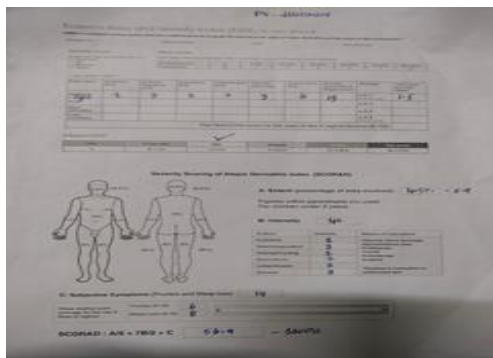
Table 2: Recommended Diet

| Morning 7:00 AM | Breakfast 9:00 Am | Mid-Morning 12:00 Pm | Lunch 2:00 PM | Evening 4:00 PM | Dinner 7:00 PM |
|---|---|--|--|--|---|
| Ash gourd / curry leaves / mint / plantain pith juice – 250 ml | Vegetables (carrot, beetroot, cucumber,)100g, Fruits (banana, pomegranate, musk melon -100g, sprouts (green gram) –25g | Amla / cucumber / lemon / 250 ml | Fruit salad (papaya, banana, orange)-100g and sprouts (green gram)–50g | Amla / lemon/beetroot juice - 250ml | Vegetable (carrot, beetroot, cucumber, Pumpkin) 100g, and fruits (watermelon, guava, pineapple, banana) -100g |

Table 3: Assessment

| Variables | Baseline | Post-Test |
|--|----------|-----------|
| Easi [Eczema area and Severity index] | 1.5 | 0.4 |
| Scorad [Severity scoring of atopic dermatitis index] | 56.9 | 6.4 |
| Weight [kg] | 52 | 50.2 |
| Height [cm] | 156 | 156 |
| Blood Pressure [mm hg] | 130/90 | 130/70 |
| Pulse Rate [beats/min] | 80 | 76 |

Baseline assessment



Post-test assessment

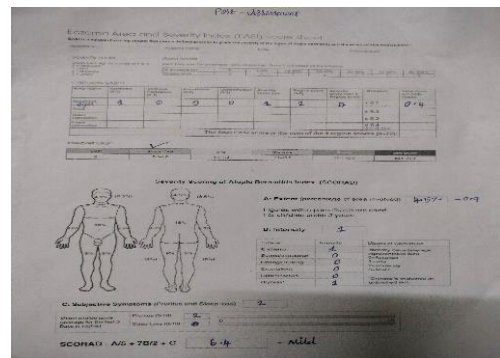


Figure 2: Shows Baseline and Post assessment

DISCUSSION

Results showed improvements in EASI, SCORAD, weight, and Blood Pressure, Pulse Rate [Table 3]. This shows the effectiveness of 4 weeks of YN interventions in reducing the severity of Atopic dermatitis. The baseline EASI and SCORAD score of 1.5 and 56.9 respectively reduced into 0.4 and 6.4 correspondingly. After 4 weeks of intervention patient had no itching and complete absence of darkening of skin and dryness. Lesions did not relapse after the intervention. Previous studies show that stress and skin diseases are interrelated that yoga-based mindfulness practice reduced blood markers of inflammation and stress, including interleukin-6 (IL-6), tumor necrosis factor-alpha (TNF-a) and cortisol [5].

An eye mud pack helps in relaxing the eyes therapeutically, it reduces irritation, itching or other allergic conditions such as conjunctivitis and hemorrhage of the eye ball [6]. The effects of colonic hydrotherapy or enema therapy on the promotion of general health or well-being in humans [7]. Numerous human clinical studies have evidenced the Phyto therapeutic efficacy of natural herbal medicines for the treatment of mild-to-severe AD [8]. Curcumin (diferuloyl-methane) is the active component of Turmeric and it has been shown to exhibit anti-inflammatory, antimicrobial, antioxidant, antineoplastic properties, and even potential to improve mental illnesses. There was a statistically significant improvement in all symptoms assessed including erythema, scaling, thickening, and itching [9]. *Cynodon dactylon* has been used as an anti-inflammatory, anti-epileptic, diuretic, antiemetic and purifying agent [10].

Acalypha indica contains a variety of phytochemicals, which include flavonoids, tannins, and alkaloids, which have anti-inflammatory and antimicrobial properties. The plant could be utilized to treat pathogen-caused skin infections caused by bacteria and fungi. The dried leaves with methanolic extract was subjected to phytochemical analyses, anti-inflammatory effect and antimicrobial effects [11]. The effect of neem leaves for curing various skin diseases. It has High flavonoids content indicates the probability of significant antioxidant potential of the neem leaves. These phytoconstituents may be mostly responsible for various medicinal properties of neem leaves [12].

Auricular therapy can promote general qi and blood circulation; hence it can eventually improve the blood flow, relieving itchiness from skin disease, regulating emotion and reducing stress, anxiety, and excessive sensitivity [13] Fruits and vegetables are rich in vitamin A, vitamin C,

vitamin D, vitamin E, flavonoids, zinc, or selenium. Vitamin E is another potent antioxidant that can decrease the production of prostaglandins and decrease serum IgE levels in atopic individuals [14] Fruits, vegetables, and other plant-based foods are rich in bioactive phytochemicals that may provide desirable health benefits beyond basic nutrition to reduce the risk of the development of chronic diseases [15]. However, this is a single case study whose results cannot be generalized. so it stresses the important of future mechanistic studies in yoga and naturopathy intervention with larger samples.

CONCLUSION

This case report suggests that integrated yoga and naturopathy interventions have significant role in managing symptoms of patients with Atopic dermatitis. However large studies are needed to confirm the same.

REFERENCES

1. Nutten S. Atopic dermatitis: global epidemiology and risk factors. *Annals of nutrition and metabolism*. 2015; 66(Suppl. 1):8-16.
2. Thappa DM, Malathi M. Is there something called adult onset atopic dermatitis in India? *Indian Journal of Dermatology, Venereology and Leprology*. 2013 Mar 1; 79:145.
3. Kim KH. Overview of atopic dermatitis. *Asia Pacific Allergy*. 2013 Apr 1;3(2):79-87.
4. Chopra R, Vakharia PP, Sacotte R, et al. Severity strata for EASI, mEASI, oSCORAD, SCORAD, ADSI and BSA in adolescents and adults with atopic dermatitis. *Br J Dermatol*. 2017 May 9; 177:1316-21.
5. Vaughn A (2017, February 14). Connection between Meditation and Skin Inflammation | Jivome. Jivome. <https://www.jivome.com/articles/surprising-connection-between-meditation-and-skin-inflammation/>
6. Patel N, Raiyani D, Kushwah N, et al. An introduction to mud therapy: a review. *Int. J. Pharm. Ther*. 2015; 6:227-31.
7. Acosta RD, Cash BD. Clinical effects of colonic cleansing for general health promotion: a systematic review. *Official journal of the American College of Gastroenterology| ACG*. 2009 Nov 1; 104(11):2830-6.
8. Hussain Z, Thu HE, Shuid AN, et al. Phytotherapeutic potential of natural herbal medicines for the treatment of mild-to-severe atopic dermatitis: A review of human clinical studies. *Biomedicine & pharmacotherapy*. 2017 Sep 1; 93:596-608.
9. Vaughn AR, Branum A, Sivamani RK. Effects of turmeric (*Curcuma longa*) on skin health: a systematic review of the clinical evidence. *Phytotherapy Research*. 2016 Aug; 30(8):1243-64.
10. Khatoon, Akther R. The Role of Ayurvedic Medicine in the Treatment of Eczema., June 2013, <http://rulrepository.ru.ac.bd/handle/123456789/699>
11. Suchitra MR, Gayathri R, Parthasarathy S, et al. Evaluation of phytochemical and in vitro anti-inflammatory and

- antimicrobial activity of *Acalypha indica* (kuppaimeni or harita manjari) against microbes causing skin diseases. *Journal of Pharmaceutical Negative Results*. 2023 Jan 31; 14(1):138-54.
12. Pandey G, Verma KK, Singh M. Evaluation of phytochemical, antibacterial and free radical scavenging properties of *Azadirachta indica* (neem) leaves. *Int J Pharm Sci*. 2014; 6 (2):4447.
13. Xiang Y, Wu X, Lu C, et al. An overview of acupuncture for psoriasis vulgaris, 2009–2014. *Journal of Dermatological Treatment*. 2017 Apr 3; 28(3):221-8.
14. Finch J, Munhutu MN, Whitaker-Worth DL. Atopic dermatitis and nutrition. *Clinics in der.*. 2010 Nov 1; 28(6):605-14.
15. Liu RH. Health-promoting components of fruits and vegetables in the diet. *Advances in nutrition*. 2013 May; 4(3):384S-92S.

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