

Evaluation of the clinical efficacy of Unani formulation on eczema

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Eczema (*Nar-e-farsi*) is a universally encountered and recurrent disease of the skin. It is estimated that 10% of people have some form of eczema at any one time. A formulation containing *Olea europea* Linn., *Lawsonia innermis* Linn. and *Nigella sativa* Linn. was prepared in the form of oil for local application and studied clinically for its efficacy on eczema. The effect of the formulation was seen on subjective parameters such as itching, burning sensation, oozing, erythema, oedema, scaling, macule, papule, vesicles, papulo-vesicles, crusting, lichenification, excoriation, and hyper pigmentation. At the end of the study statistical significance of the results was noted. It was concluded that the formulation was effective on eczema.

Key words: *Olea europea*, *Lawsonia innermis*, *Nigella sativa*, *Nar-e-farsi*, Eczema, Unani formulation

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Eczema (*Nar-e-farsi*) is an inflammatory response of skin to multiple agents. Its prevalence varies from 2-3%. The plaques formed as a result of this disease cause anxiety, depression and lack of self confidence, and can lead to social isolation if these are obviously visible. Nowadays, prevalence of this disease is increasing due to increase in the number of agents in the environment. In spite of the advances in medical science especially introduction of corticosteroids, which have completely altered the nature of management of eczema, there is need of cheaper and safer drugs for its treatment. As long term use of corticosteroid is contradictory due to its side effects after systemic absorption. Unani System of Medicine provides successful treatment to a number of skin ailments. Drugs like *Olea europea* (olive oil), *Lawsonia innermis* (henna) and *Nigella sativa* (black cumin) have been reported to be effective in eczema. Hence, attempt has been made to study clinically the efficacy of the formulation containing olive oil, henna and black cumin locally on the lesion of eczema.

Methodology

After obtaining clearance from Institutional Ethical Committee, the study was conducted in outdoor and indoor section of Ajmal Khan Tibbiya College Hospital, Aligarh Muslim University, Aligarh during June 2001-May 2003. 30 patients of established

eczema in the age group of 10-70 were included in the study. The patients were selected on the basis of clinical diagnosis. The clinical features like itching, burning sensation, oozing, erythema, oedema including papule, vesicles, papulo-vesicles, scaling, crusting, lichenification, excoriation, and hyper pigmentation, were the subjective parameters of the study. The drugs, henna and black cumin were obtained from Dawakhana Tibbiya College, Aligarh, and olive oil was purchased. The above drugs were identified and their authenticity was confirmed in Pharmacognosy and Medicinal Chemistry Laboratories, Department of Ilmul Advia, Ajmal Khan Tibbiya College, AMU, Aligarh.

This non-pharmacopoeial formulation was prepared in the form of oil. At first, dried and crushed leaves of henna (25 gm) and black cumin (25 gm) were mixed with 200 ml of olive oil. Then, the mixture was heated till the drugs burnt/charred. The mixture was then filtered and the filtrate was stored as oil in plastic containers. The oil thus prepared was applied four times a day at the interval of 6 hrs on the eczematous lesions. The duration of the study was 42 days. No concomitant treatment was allowed during the study. The adverse effects of the drug (oil) were also noted. The follow up of all the cases was carried out at the interval of 7 days on the basis of history and clinical examinations. The observations and data collected were tabulated and statistically analysed by applying Z-test for proportion.

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Results and discussion

The observation before, during, and after the treatment were recorded and have been tabulated (Figs 1,2). The effect of the drugs on itching, burning sensation, and oozing was 70% ($Z=3.1$, $P<0.05$),

71.4% ($Z=3.2$, $P<0.05$) and 81.3% ($Z=3.44$, $P<0.05$), respectively (Table 1). It was observed that after 42 days of treatment, improvement in macules, papules, vesicles and papulo-vesicles was 75% ($Z=3.57$, $P<0.05$), 78.9% ($Z=3.54$, $P<0.05$), 83.3% ($Z=4.18$,



Fig. 1 — Before treatment



Fig.2 — After treatment

Table 1 — Effect of formulation on the itching, discharge, and burning sensation

Clinical features	0 day	7 th day		14 th day		21 st day		28 th day		35 th day		42 nd day	
	No of patients	No of patients	% of improvement	No of patients	% of improvement	No of patients	% of improvement	No of patients	% of improvement	No of patients	% of improvement	No of patients	% of improvement
Itching	30	30	0	27	10	25	16.7	20	33.3	15	50	9	70
Discharge	21	21	0	20	5	18	14.3	15	28.5	8	61.9	6	71.4
Burning sensation	16	16	0	14	12.5	12	25	10	37.5	7	56.3	3	81.3

Table 2 — Effect of formulation on macules, papules, vesicles, and papulo vesicles

Clinical features	0 day	7 th day		14 th day		21 st day		28 th day		35 th day		42 nd day	
	No of patients	No of patients	% of improvement	No of patients	% of improvement	No of patients	% of improvement	No of patients	% of improvement	No of patients	% of improvement	No of patients	% of improvement
Macules	24	24	0	24	0	24	0	20	16.7	10	58.3	6	75
Papules	19	19	0	16	15.8	14	26.3	10	47.7	8	57.9	4	78.9
Vesicles	18	18	0	15	16.7	13	27.7	10	44.4	8	55.5	3	83.3
Papulo-vesicles	18	18	0	15	16.7	13	27.7	11	38.8	9	50	3	83.3

Table 3 — Effect of formulation on scaling, excoriation, lichenification, and hyper pigmentation

Clinical features	0 day	7 th day		14 th day		21 st day		28 th day		35 th day		42 nd day	
	No of patients	No of patients	% of improvement	No of patients	% of improvement	No of patients	% of improvement	No of patients	% of improvement	No of patients	% of improvement	No of patients	% of improvement
Scaling	12	12	0	12	0	10	16.6	8	33.3	6	50	3	75
Lichenification	16	16	0	16	0	13	18.7	11	31.2	11	31.2	8	50
Hyper pigmentation	14	14	0	14	0	14	0	14	0	12	145.3	12	14.3
Excoriation	13	13	0	13	0	10	23.1	8	38.5	8	38.5	6	53.8

Table 4 — Effect of formulation on erythema, oedema, and crusting

Clinical features	0 day	7 th day		14 th day		21 st day		28 th day		35 th day		42 nd day	
	No of patients	No of patients	% of improvement	No of patients	% of improvement	No of patients	% of improvement	No of patients	% of improvement	No of patients	% of improvement	No of patients	% of improvement
Erythema	18	18	0	16	11.1	12	33.3	10	44.4	7	61	5	72.2
Oedema	17	15	11.7	12	29.4	10	41.2	8	52.9	5	70.5	3	82.3
Crusting	20	18	10	16	20	10	50	10	50	8	60	6	70

Table 5 — Effect of formulation on tenderness

Clinical feature	0 day	7 th day		14 th day		21 st day		28 th day		35 th day		42 nd day	
	No of patients	No of patients	% of improvement	No of patients	% of improvement	No of patients	% of improvement	No of patients	% of improvement	No of patients	% of improvement	No of patients	% of improvement
Tenderness	24	22	8.3	18	25	15	37.5	10	58.3	9	62.5	5	79.2

$P < 0.05$) and 83.3% ($Z = 4.18$, $P < 0.05$), respectively (Table 2). It is evident that improvement in scaling, lichenification, hyper pigmentation and excoriation was 78%, ($Z = 3.57$, $P < 0.05$), 50% (insignificant) 14.3% (insignificant) and 53.8% (insignificant) at the end of the study (Table 3). It was observed that 72.2% ($Z = 2.2$, $P < 0.05$), 82.31% ($Z = 5.8$, $P < 0.05$) and 70% ($Z = 2.5$, $P < 0.05$) patients having erythema, oedema and crusting, respectively improved at the end of the study (Table 4). It was also observed that effect of the formulation on tenderness was 79.2% ($Z = 4.14$, $P < 0.05$) (Table 5). The effect of the formulation was significant clinically and statistically on subjective parameters except hyper pigmentation, excoriation,

and lichenification. The response of the formulation was least on these three parameters.

The results obtained are encouraging. This might be owing to the combined effect of the three drugs of the formulation. *Olea europea* has emollient, sedative, antiinflammatory, and demulcent properties, when used externally^{1,2,4,5,8-11}. *Lawsonia innermis*, a good antiinflammatory and analgesic allays burning sensation^{7,11}. *Nigella sativa* is used locally as an antiinflammatory, detergent, anaesthetic, and antibacterial agent⁶⁻¹¹. The formulation, used in the form of oil provides a coating on the lesion that may keep the allergen away from coming into contact with the lesion. So, healing process smoothed and the lesion healed fast.

Conclusion

The efficacy of the Unani formulation on subjective parameters of eczema was found clinically and statistically significant. The formulation was tolerated well and during the course of study no adverse effect was observed. As the study was done in limited duration with a small group of patients further advance study need to be carried out in this field.

References

- 1 Anonymous, *Standardization of Single Drugs of Unani Medicine*, Part II, (Central Council for Research in Unani Medicine, New Delhi), 1992, 196.
- 2 Anonymous, *The wealth of India- Raw Materials Series, Vol VII*, (National Institute of Science Communication, CSIR, New Delhi), 1996, 63, 91.
- 3 Behl PN, Aggarwal A & Govind S, *Practice of Dermatology*, (CBS Publishers & Distributors, Darya Ganj, New Delhi), 2002, 126.
- 4 Chatterjee Asima & Prakash SC, *The Treatise on Indian Medicinal Plants*, (Publications and information Directorate, New Delhi), 1995, 187
- 5 Chopra RN, Nayar SL & Chopra IC, *Glossary of Indian Medicinal Plants*, (National Institute of Science Communication, New Delhi), 1996, 151,176,180.
- 6 Kantoori GH, *Tibb-e-Islami Ka Encyclopaedia*, Vol II, (Book Printers, Lahore), 1992, 153.
- 7 Khan Najmul Ghani, *Khazenat-ul-Advia*, Vol III, (Munshi Naval Kishore, Lucknow), 1913, 354.
- 8 Khan Najmul Ghani, *Khazenat-ul-Advia*, Vol II, (Munshi Naval Kishore, Lucknow), 1913, 692.
- 9 Kritkar KR, & Basu BD, *Indian Medicinal Plants*, Vol II, (International Book Distributors, Allahabad), 1981, 1077.
- 10 Lubhaya Ram, *Goswami Bayan-ul-Advia*, Part I, (Goswami Pharmacy, Delhi), 1977, 298.
- 11 Nadkarni KM, *Indian Materia Medica*, Vol I, (Bombay Popular Prakashan, Bombay), 1986, 730, 854, 870.