

**Evaluation of the efficacy, safety  
and antioxidant effect of *Nigella  
sativa* in the treatment of psoriasis**

*A thesis*

*Submitted to the Department of Pharmacology, College of  
Medicine, University of Basrah in partial fulfillment of  
the requirement for the degree of Master of Science in  
Pharmacology*

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**2011 A.D.**

**1432 A.H.**

# Abstract

## Background

Psoriasis is a common distressing dermatological disease with no unique curative systemic or topical treatment. Various drug regimens are used with a variable benefits. Among drugs which are commonly used for the treatment of psoriasis is methotrexate, a cytotoxic drug which is found effective but it has a distressing side effects. Since *Nigella sativa* (Black Cumin) has antioxidant, anti-proliferative, and anti-angiogenesis properties, it is thought that it could have a beneficial effect in psoriasis.

## Objectives

- 1- To evaluate the efficacy and safety of topical and oral uses of *Nigella sativa* in the treatment of mild to moderate psoriasis.
- 2- To evaluate the anti oxidant effect of *Nigella sativa* in the treatment psoriasis.

## Methods

This study is an open-label, therapeutic, outpatient-based study that enrolled (100) patients with mild to moderate plaque and palmoplantar psoriasis. forty out of 100 patients were defaulted from the study, only (60) patients were continue treatment throughout study period. All patients were selected during their consultation to the outpatient clinic of

Department of Dermatology and Venereology at Al-Sadder Teaching Hospital in Basrah during the period from January 2010 to March 2011.

The patients were randomly divided into three groups according to their treatments, as follows: Patients in group 1 (20 patients) were treated with (10% w/w) ointment of *Nigella sativa*, group 2 (20 patients) were treated with crude powder of *Nigella sativa* (500 mg capsule three times daily), and patients in group 3 (20 patients) were treated with the combination of ointment and orally administered powder of *Nigella sativa*. The clinical responses were evaluated using PASI score "Psoriasis Area Severity Index". Assessment of oxidative stress was made by measurement of Malondialdehyde (MDA). A base line values were obtained for PASI score and MDA, the patients were then followed up for 12 weeks. Patients satisfaction, side effects of nigella and photographic viewing of psoriatic lesion were monitored as well for 12 weeks after starting treatments.

## **Results**

There were 28 males, with a mean age of  $(35.7 \pm 11.9)$  years, and 32 females with a mean age of  $(35.3 \pm 12.9)$  years. The ointment of *Nigella sativa* achieved a complete cure of psoriatic lesions, excellent response and a good response in about 65% of the patients, with a relapse rate of 31% noticed 4 weeks after cessation of the treatment. The orally administered crude powder of *Nigella sativa* induced excellent and a good response in 50% of patients, with a relapse rate of 50% noticed 4 weeks after cessation of treatment. The combination of ointment and orally administered capsule of *Nigella sativa* achieved a complete cure

of psoriatic lesions excellent response and a good response in 85% of cases, with a relapse rate of 18%.

The onset of response to the treatment appeared early after 2 weeks treatment with the combination of ointment (10% w/w) of *Nigella sativa* oil and the orally administered crude powder of *Nigella sativa* (500mg in a capsule dosage form). The onset of response was appeared after 4 and 8 weeks monotherapy treatment with the ointment and monotherapy of orally administered capsule of *Nigella sativa* respectively.

A good and significant direct correlation between % reduction of PASI score and % reduction of MDA was found in the group of patients who were on the combination of capsule and the ointment of *Nigella sativa*.

*Nigella sativa* is well tolerated and no side effects were reported in all the treated patients.

## **Conclusion**

*Nigella sativa* has anti psoriatic effect. The effect was more with the combination of ointment and crude powder capsule of *Nigella sativa*. In addition *Nigella sativa*, in the range of doses used in the present study, was well tolerated and free of side effects.