



DERMA TODAY

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Dear Doctor,

Greetings from Micro Labs. We are happy to bring you "**Derma Today**" which contains latest and interesting news in the field of Dermatology.

This issue contains:

1. Acne treatment: efficacy of intense pulsed light photodynamic therapy with topical licochalcone A, l-carnitine, and decanediol.
2. Today's Pick: Can Apple cider vinegar help treat dandruff?

Should you require any article or, medical information, please feel free to contact us
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Looking forward to your valuable feedback.

Best Regards,

Medical Team, Micro Labs Limited.





Acne treatment: efficacy of intense pulsed light photodynamic therapy with topical licochalcone A, l-carnitine, and decanediol

Acne vulgaris is a disease of the pilosebaceous unit. It has four pathogenic factors: abnormal keratinization, increased sebum production, *Propionibacterium* colonization and inflammation. Standard modes of Acne treatments can vary from topical to systemic therapy, depending on the severity of the disease. Mild Acne is treated by topical treatment options, e.g. retinoids, antibiotics, and benzoyl peroxide. Systemic therapies are used to treat patients with moderate to severe disease. However, the major impediment to successful treatment, remains poor compliance caused by adverse events and antibiotic resistance. This can cause treatment failure.

Laser therapies and related modalities exhibit promising effect on acne treatment. It has rare local adverse events. It has no systemic side effects. Hence, Laser treatment have potential to be considered as alternative treatment in recalcitrant cases that evade conventional treatment protocol

Photodynamic therapy is a light-based therapy. It is based on photochemical reaction of light-activated photosensitizing agents which exist in endogenous and exogenous forms.

Intense pulsed light (IPL) is a non-laser device for acne treatment.

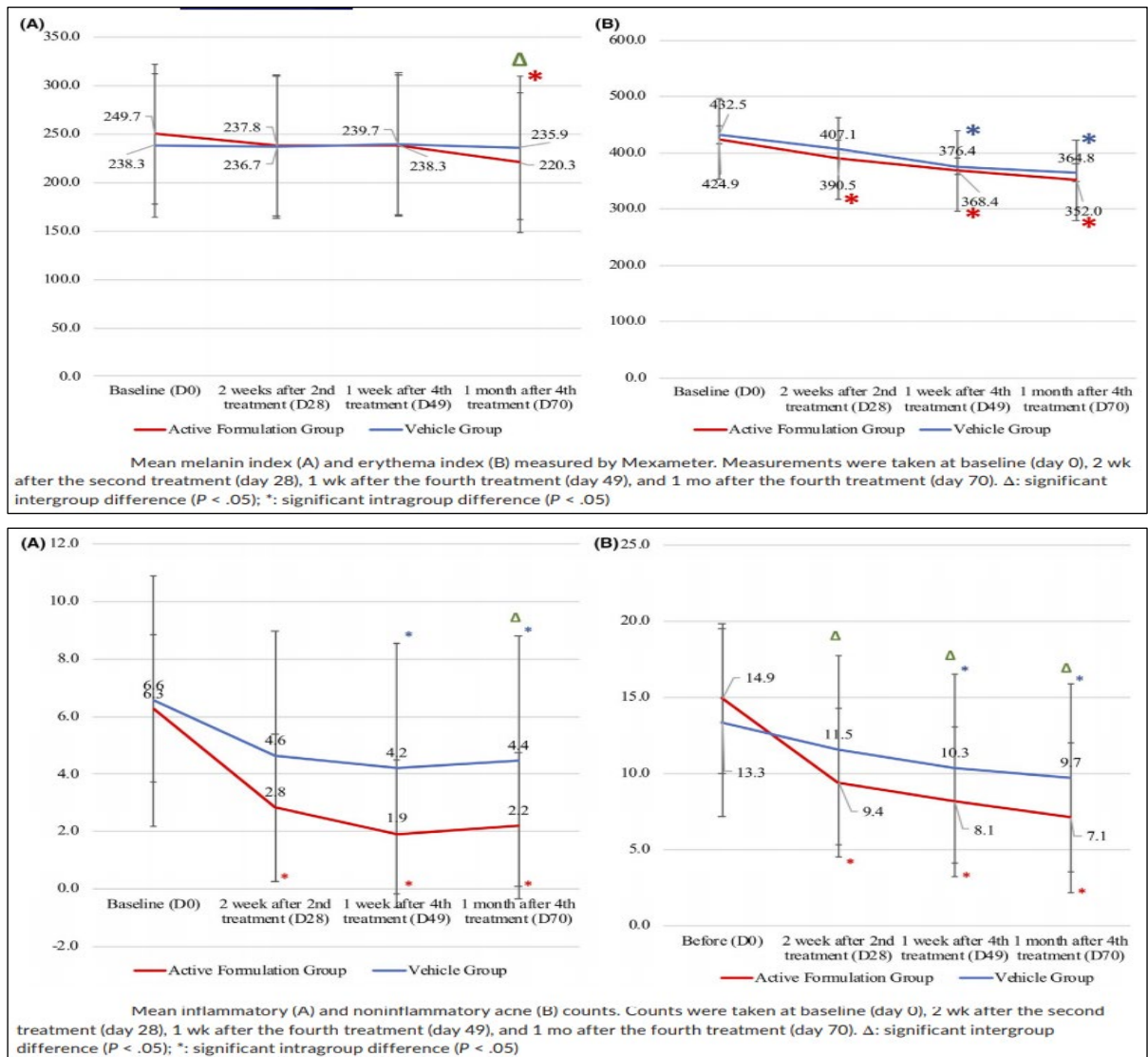
Aim: To determine the effectiveness of photodynamic therapy (PDT) with intense pulsed light (IPL) in the treatment of acne when combined with cream containing licochalcone A, L-carnitine and decanediol ('active formulation') versus photodynamic therapy (PDT) used alone.

Methods: Twenty-nine volunteers were selected. They were aged between 21-39 years. Amongst them were 26 women and 3 men. Their mean age was 29.41 ± 5.24 years. The participants enrolled had presented with mild to severe facial acne.

Each participant's face sides were randomized in a split-face manner to either receive PDT (IPL with a 400-720 nm cut-off filter, at 4 sessions with two-week intervals), which was combined with the application of active formulation cream (cream containing licochalcone A, L-carnitine and decanediol) twice daily for a period of 10 weeks on one face side; or PDT and the vehicle cream on the other side, with the same treatment protocol.

Reduction in acne quantity, melanin index and erythema index were assessed 2 weeks after the second treatment (day 28), 1 week after the fourth treatment (day 49) and 1 month after the fourth treatment (day 70)

Results: When compared to baseline, patients who were applying the active



formulation demonstrated a comparatively rapid onset of reduction in the number of lesions at 2 weeks after the second treatment ($p=0.010$ for inflammatory acne and $p=0.001$ for non-inflammatory acne).

A significantly greater reduction in the number of lesions were observed in the group applying active formulation compared with the group applying vehicle group at all predetermined time point of

evaluation for non-inflammatory acne (day 28, day 49 and day 70; $p=0.003$, 0.005 and 0.002 respectively), and at 1 month after the fourth treatment for inflammatory acne ($p=0.036$).

Compared to the group applying the vehicle, the melanin index of the group on active formulation decreased significantly at 1 month, after the fourth treatment ($p=0.015$)



Conclusion:

PDT with IPL has been seen to be more effective in treating acne when combined with the application of topical cream which contain licochalcone A, L-carnitine and decanediol, than when PDT is used alone.

Significant reduction of acne and improvements in post-inflammatory hyperpigmentation were also observed. It offered acne patients a safe and effective therapeutic option for patients with moderate and severe acne.

Wanitphakdeedecha R et al Journal of Cosmetic Dermatology. 2020 Jan;19(1):78-87.

Today's Pick

Can Apple cider vinegar help treat dandruff?

Apple cider vinegar is made from fermented apple juice. Apple cider vinegar is the common component in a number of natural remedies due to its antimicrobial and antioxidant properties.

It is believed that Apple cider vinegar can relieve dandruff by adjusting scalp pH.

Few studies have demonstrated that apple cider vinegar may offer health benefits that could help reduce symptoms of dandruff. It restores the scalp pH (The ideal pH of the scalp is approximately 5.5). Other factors that can affect scalp pH are excess sebum, sweat, air pollution, antibacterial products, sun exposure, detergent etc.

Apple cider vinegar contains acetic acid. This weak acid may help restore the pH level of the scalp, which could reduce dandruff symptoms. It inhibits the growth of fungi and bacteria. In 2019, a study suggested that undiluted apple cider vinegar has antimicrobial potential which can limit the growth of certain bacteria and fungi when undiluted.

Washing the scalp with a solution of diluted apple cider vinegar may help reduce dandruff. People should perform a patch test if they have never applied apple cider vinegar to their skin.

Gopal J. et al. Natural product research. 2019;33(6):906-10.