

DERMACON INTERNATIONAL 2019 INDIA

Indian Mission - Global Vision

17th - 20th Jan 2019

Clarks Exotica Convention Resort & Spa,
Bengaluru.



KEY HIGHLIGHTS

- ▶ The 47th Annual conference of IADVL, with an international outreach program and with a theme of "Indian mission with global vision" will bring together.
- ▶ 9000 international & national delegates.
- ▶ Around 400 national & more than 60 international faculty and experts.
- ▶ Around 150 worldwide industry participations from reputed pharmaceutical companies, lasers & dermatological technologies.
- ▶ Well-structured plenary, orations, symposia, guest lectures, debates, national quiz, award papers, free communications and posters, apart from other official programs.
- ▶ Well planned courses & workshops on dermatosurgery, aesthetic dermatology, lasers and other procedural dermatology.

INTERNATIONAL EVENTS

- ▶ 5 Sister Society has been confirmed (South Africa, Singapore, Iran, Sri Lanka & SARAD) we are expecting more.
- ▶ DERMACON International Quiz Competition.
- ▶ Review Article Writing. (Alternative to Essay Competition Announced Earlier)
- ▶ DERMACON International Scholarships to Young Dermatologists.
- ▶ Global Leadership Session.
- ▶ Scholarship Program for International Delegates.

CONFERENCE & CME REGISTRATION FEES

Delegate Category	SLAB 2 1 st May to 31 st Aug 2018		SLAB 3 1 st Sept to 15 th Dec 2018		SLAB 4 / SPOT REG 16 th Dec onwards	
	Conference Only	CME + Conference	Conference Only	CME + Conference	Conference Only	CME + Conference
IADVL Members	₹ 10000	₹ 12700	₹ 11500	₹ 14500	₹ 15000	₹ 19000
Post Graduates IADVL members	₹ 7000	₹ 8500	₹ 8000	₹ 9500	₹ 10000	₹ 12500
Accompanying Person	₹ 7000	₹ 8500	₹ 8000	₹ 9500	₹ 10000	₹ 12500
Workshop Registrations fees						
Workshops	₹ 2000	N/A	₹ 2500	N/A	₹ 3000	N/A
Target Course	₹ 3000	N/A	₹ 3500	N/A	₹ 4000	N/A



Dr S. Sacchidanand Organising Chairperson
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Newer and Emerging Topical Therapies in Dermatology

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Some newer and emerging topical therapies in dermatology in recent times are discussed here.

FENTICONAZOLE

Fenticonazole is an imidazole antifungal agent used to treat fungal infections of the vagina (Vulvovaginal candidiasis). It is active against a range of organisms including dermatophytes, *Malassezia furfur* and *Candida albicans*. It is not recommended for usage in pregnancy and lactation. Side effects include local reactions like burning sensation, itching and rash, which are rare. Fenticonazole nitrate is available for topical use as a 2% cream. Fenticonazole acts by inhibition of the synthesis of aspartate (acid) proteinase, a virulence enzyme of *C. albicans* correlated with the adherence of the yeast to epithelial cells.

HYDROGEN PEROXIDE 40%

It is a proprietary formulation of a stabilized high concentration hydrogen peroxide solution that is the first and only US Food and Drug Administration (FDA) approved topical treatment for raised seborrheic keratoses. It acts by direct oxidation of organic tissues, local lipid peroxidation and generation of reactive oxygen species as well as generation of local concentrations of oxygen that are toxic to seborrheic keratoses cells. It is available as a 40% solution.

TRIFAROTENE 0.005% CREAM

Cellular effects of retinoids are mediated by two types of nuclear receptors: the retinoic acid receptor (RAR) and the retinoid X receptor (RXR), both of which are present in three isoforms (alpha, beta and gamma). Trifarotene is a fourth-generation topical retinoid, a potent and a

selective RAR-gamma receptor agonist. This results in better efficacy and a favorable safety profile in acne and ichthyotic disorders. It has completed phase 3 trials in acne vulgaris in November 2017.

ATROPINE SULFATE

It is an anticholinergic agent and antimuscarinic agent (parasympatholytic). It is indicated in primary axillary hyperhidrosis, symptomatic eruptive syringomas and multiple eccrine hidrocystomas. Mechanism of action: Tumor cells differentiate towards dermal duct cells. Cells could get activated during cholinergic stimulation and atropine would antagonize the above action completely. The agent is available as atropine sulfate 1% ointment.

TIMOLOL MALEATE

It is a beta-blocker medication. It has been used in superficial and small infantile capillary hemangiomas and pyogenic granuloma. It causes constriction of the blood vessels, and reduces blood flow, resulting in reduction in size of cells, making the vessels softer. It is available as 0.5% gel.

THYMOL LOTION

Thymol is found in oil of thyme, extracted from *Thymus vulgaris* (plant). Mechanism of action: It alters the hyphal morphology, causes hyphal aggregates which results in lyses of the hyphal wall. It is indicated in Tinea infections and Candidal paronychia.

INDIRUBIN

It is an active ingredient in Indigo naturalis (Chinese medicine). It is a chemical compound (oily extract) produced as a by-product of bacterial metabolism. Lindioil is a refined formulation of Indigo naturalis. Mechanism of action: Indigo naturalis extract regulates proliferation and differentiation of epidermal keratinocytes, restores the epidermal barrier function and inhibits inflammatory reactions. It reduces subungual hyperkeratosis and onycholysis. It acts as an anti-inflammatory and as an antiangiogenic agent. Indications: Psoriasis.

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TOPICAL AGENTS IN THE PIPELINE FOR ACNE

Agents Targeting Sebum Production

- Topical antiandrogens:
 - Cortisolone-17 alpha-propionate (CB-03-01) is a monoester of cortisolone which has anti-androgen actions with no systemic side effects.
 - ASC-J9 cream causes degradation of the androgen receptor. It also causes reduction in the sebum production.
 - NVN-1000 (SB204) is a gel that causes release of nitric oxide with topical application. It decreases cutaneous androgen levels by inhibiting cytochrome P450, reduces 5-alpha reductase activity, thereby reducing sebocyte proliferation. It also exhibits antibacterial effects.
- Melanocortin receptor antagonists: JNJ 10229570, a melanocortin receptor 1 and 5 antagonist, reduces the size of sebaceous glands and the production of sebaceous lipids.
- Insulin-like growth factor 1 inhibitors: Epigallocatechin-3 gallate (EGCG), is a polyphenolic constituent in green tea. It inhibits 5-alpha reductase 1 activity, limiting dihydrotestosterone-dependent sebum production. It also exerts antimicrobial activity against *Propionibacterium acnes*.
- Acetylcholine inhibitors: Botulinum toxin inhibits the presynaptic acetylcholine release, reducing sebum production, pore size and skin oiliness.
- Acetyl coenzyme A carboxylase (ACC) inhibitors: They reduce synthesis of triglycerides, increasing oxidation of fatty acids. DRMO1 7.5% gel is under trial.

Agents that Normalize Abnormal Keratinization within the Pilosebaceous Unit

- Retinoic acid metabolism blocking agents: Talarozole inhibits cytochrome CYP26, increasing levels of retinoic acid, causing normalization of follicular epithelium, reducing comedo formation. 0.35% and 0.7% talarozole gel is formulated that causes less irritation.
- Monoclonal antibodies and anti-interleukin (IL)-1 alpha: RA-18C3, an IL-1 alpha monoclonal antibody is used to treat moderate-to-severe acne. Subcutaneous injections of 100 mg/200 mg of RA-18C3 are given on days 0, 21 and 42 for a total of 3 injections, showing significant improvement.

Agents that Work by Modulating the Inflammatory Response

Phosphodiesterase (PDE) inhibitors, inhibitors of IL-1 beta-mediated inflammatory response - Gevokizumab, Vitamin D analogs, Dapsone gel 5%.

BEXAROTENE GEL

Bexarotene gel 1% is effective in treating mild-to-moderate plaque psoriasis as monotherapy and in combination with narrow band ultraviolet B (NB-UVB). Mechanism of action: It selectively binds to nuclear retinoid X receptor.

EOSIN AND OIL OF CADE

Topical preparation of 2% eosin alone or in combination with oil of Cade is effective in the treatment of flexural/napkin psoriasis in children.

IVERMECTIN 1%

Cream formulation is effective in treating papulopustular rosacea and in periorificial dermatitis in children. In 2014, the US FDA approved this medication for the treatment of rosacea in adults. Ivermectin is efficacious in reducing inflammatory lesion counts and erythema. Mechanism of action: Ivermectin is a topical antiparasitic agent, a macrocyclic lactone with broad-spectrum activity against multiple parasitic organisms. Ivermectin eradicates Demodex mites that reside in the pilosebaceous units of patients with papulopustular rosacea. Anti-inflammatory effects of ivermectin are achieved through reducing neutrophil phagocytosis and chemotaxis, inhibition of inflammatory cytokines and upregulation of anti-inflammatory cytokine.

BRIMONIDINE TARTRATE (0.33% GEL)

It is the first topically effective agent for the treatment of facial erythema of rosacea having a rapid onset, sustained duration of effect for 12 hours, and good tolerability. It is applied once a day. Mechanism of action: It is a highly selective alpha-2 adrenergic receptor agonist and is 1000-fold more selective for the alpha-2 adrenergic receptor than the alpha-1 adrenergic receptor. It is a potent vasoconstrictor of the subcutaneous vessels, acts as an anti-inflammatory agent by reducing edema associated with rosacea. It is metabolized by the liver, and the major route of elimination is urinary excretion.

TAZAROTENE GEL (0.1%)

It has now been recommended in the treatment of moderate-to-severe facial atrophic acne scars.

NEWER TOPICAL AGENTS FOR ATOPIC DERMATITIS

Targeting Janus Kinase

Tofacitinib inhibits JAK1 and JAK3, and inhibits TH2 signalling pathways. It also inhibits cytokines such as IL-4, attenuating JAK-STAT signalling in keratinocytes. It has a good safety profile, early onset of effect and local tolerability, with the most common adverse event being self-limited infections, (nasopharyngitis) and application site pain and pruritus. Ruxolitinib, a JAK1/JAK2 inhibitor, is currently under a phase 2 study in adult atopic dermatitis patients.

PDE4 Inhibitors

Crisaborole - It is a boron-based (phenoxybenzoxaborole), nonsteroidal, topical anti-inflammatory, PDE4 inhibitor, identified through the development and screening of various benzoxaborole derivatives. It is a small molecule, the first in its class to be approved by the FDA. Mechanism of action: Inhibition of PDE4 causes increase in the levels of cyclic AMP, thereby controlling inflammation. Once crisaborole reaches systemic circulation after topical application, it is metabolized to inactive metabolites thus limiting systemic exposure to crisaborole and systemic PDE4 inhibition. It is available as a 2% topical ointment. It is used in the treatment of mild-to-moderate atopic dermatitis in children 2 years and older.

Benvitimid

It is a nonsteroidal, anti-inflammatory molecule that was originally derived from the metabolites of nematodes. It causes reduced expression of pro-inflammatory cytokines, inhibition of T-cell viability and infiltration, thus diminishing skin inflammation. Adverse events are folliculitis, contact dermatitis and headache. Two phase 2 trials have been completed and published on the safety and efficacy of topical benvitimid treatment.

BIMATOPROST

It is a synthetic prostamide F2a analog. It exerts its effects by stimulating the prostamide receptor. Eyelash hair follicles are higher in the telogen phase, which supports the effectiveness of bimatoprost for hypotrichosis of the eyelashes. The US FDA approved the use of bimatoprost ophthalmic solution 0.03%

in December 2008. The recommended application of bimatoprost 0.03% ophthalmic solution is one drop daily for 16 weeks. Indications: FDA-approved - Eyelash hypotrichosis; Other off label uses - Eyebrow hypotrichosis, androgenetic alopecia, alopecia areata; Others with minimal evidence - Vitiligo.

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