

Reports on Scientific Meeting

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Reported by MLS Chiu 趙麗珊, JTHT Yu 余浩德, MC Wong 王夢貞

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Update on non-surgical management of vitiligo

Speaker: Dr. M Ramam

Professor, Department of Dermatology and Venereology, All India Institute of Medical Sciences

The speaker gave a brief review of published reports on the medical therapy of vitiligo in the last five years. First of all, the use of topical agents was discussed. Fifty percent of the patients had more than 75% of their lesions repigmented after 0.1% tacrolimus treatment. The efficacy was comparable to clobetasol propionate. There was limited data on pimecrolimus but a trial showed that its efficacy was comparable to that of clobetasol propionate. Imiquimod was not effective for treating vitiligo. The use of calcipotriol was controversial due to conflicting reports. A study on topical prostaglandin (PEG2) showed significant repigmentation in those with limited vitiligo.

The efficacy of light therapy was also reviewed. Narrow band UVB was shown to be effective in several studies in repigmentation of vitiligo in both adults and children. It was as effective as PUVA

and was safe to use in children. The excimer laser was effective in repigmentating localised vitiligo. The extent of repigmentation depended on the total dose of irradiation but not on the frequency of treatments. A pilot study with monochromatic excimer light showed excellent repigmentation after 6 months in about half of the patients treated. The helium neon laser was reported to produce more than 50% repigmentation in more than 50% of patients with segmental vitiligo.

The use of oral medications was evaluated. Systemic corticosteroid, given either in weekly pulses or monthly bolus, was effective in treating vitiligo. Cessation of progression was found in 85% of patients with progressive disease in an open study using intravenous methylprednisolone pulse. Levamisole was shown to be effective in an open study. However, it showed no difference to placebo in a double blind randomised controlled trial. In conclusion, different modalities are effective in the treatment of vitiligo. However, 100% cure and 0% recurrence is still difficult to achieve and it remains a challenge to every dermatologist.

Learning points:

The large number of modalities tried in treating vitiligo speaks for the lack of an effective treatment. The choice would rest on the risks, benefits and availability of the particular therapy.

Evaluating and managing common ulcerative conditions on the oral mucosa

Speaker: Dr. Alison Bruce

Department of Dermatology, Mayo Clinic, Rochester

Oral ulcers can be acute (less than six weeks) and chronic (over six weeks), depending on the duration of lesions. Causes of acute oral ulcer include trauma, drugs, iatrogenic and infections (Table 1). Diagnosis of oral ulcer should be based on the duration of lesions, whether this is a single or recurrent episode, and the location.

Many drugs are known to cause oral ulceration e.g. non-steroidal anti-inflammatory drugs, cytotoxic drugs, captopril, calcium channel blockers, alendronate, hydroxyurea etc. It is therefore important to take a good history including any over-the-counter medications when managing these patients. Furthermore, oral ulcers frequently occur after radiotherapy and chemotherapy.

Infection of the oral mucosa can be bacterial and viral. Acute necrotizing ulcerative gingivostomatitis

is a condition caused by mixed anaerobic microorganisms. It is characterised by acute onset of gingival pain, bleeding and ulceration associated with systemic features such as fever, malaise and lymphadenopathy. There are many other bacterial conditions that can lead to acute oral mucosal ulceration, like syphilis, gonorrhoea, tuberculosis, histoplasmosis, rhinoscleroma etc.

Acute herpetic gingivostomatitis is the most common acute viral ulcerative condition of the oral mucosa. It is more common in children and is characterised by painful grouped vesicles with systemic upset. Treatment is usually symptomatic with analgesics, antipyretics and topical antiseptic mouthwash. However, in the immunocompromised, intravenous acyclovir is indicated. Other viral aetiologies of acute oral mucosal ulceration includes Epstein-Barr virus causing infectious mononucleosis, coxsackie A virus causing hand, foot and mouth disease, varicella, measles, rubella etc.

The two most common causes of acute recurrent oral ulceration (Table 2) are recurrent aphthous stomatitis and recurrent intra-oral herpes simplex

Table 1. Causes of acute oral ulcerations (single episode)

Trauma	<ul style="list-style-type: none"> Physical injury
Drugs	<ul style="list-style-type: none"> Non-steroidal anti-inflammatory drugs, cytotoxic drugs, captopril, calcium channel blockers, alendronate, hydroxyurea
Iatrogenic	<ul style="list-style-type: none"> Chemotherapy Radiotherapy
Infections	<ul style="list-style-type: none"> Bacterial, e.g. acute necrotizing ulcerative gingivostomatitis, syphilis, gonococcus, tuberculosis, histoplasmosis Viral, e.g. herpes simplex, varicella zoster, coxsackie, measles, Epstein-Barr

Table 2. Causes of acute recurrent oral ulceration

Trauma	<ul style="list-style-type: none"> Braces
No systemic symptoms	<ul style="list-style-type: none"> Herpes simplex Recurrent aphthous stomatitis
Systemic symptoms	<ul style="list-style-type: none"> Cyclic neutropenia Inflammatory bowel disease Behçet's disease HIV

infection. Recurrent aphthous stomatitis is a mucosal manifestation of a variety of conditions. It is more common in female and occurs on the soft, mobile, non-keratinized mucosa. The causes of recurrent aphthous stomatitis are multifactorial and triggers include infection, emotional stress, diet, trauma, vitamins deficiency, xerostomia, smoking and many other conditions. The goal of therapy is to decrease the frequency and severity of future episodes as well as the control of pain and promotion of healing. It is important to screen for any associated systemic disorders and vitamin deficiency. Suggested work up includes complete blood picture, liver and renal function, iron studies, folate, B12 and zinc level.

Recurrent intra-oral herpes simplex stomatitis tends to occur in young patients on the masticatory mucosa with complete clearance between episodes. There are many over-the-counter topical medications for this condition but Abreva® is the only FDA approved non-prescription topical medications in the United States. Topical 1% penciclovir cream is also effective, but in an immunocompromised patient, intravenous acyclovir is indicated. Prophylaxis with oral acyclovir 400 mg twice daily can be offered to patients with frequent attacks.

Cyclic neutropenia is characterised by recurrent acute episodes of oral ulceration typically in a young patient. The interval is constant for each patient. It lasts around 12-30 days and is associated with systemic features such as fever, malaise and neutropenia during the attack.

Conditions that cause chronic oral ulcers can be divided into trauma, iatrogenic, infective, inflammatory and malignant (Table 3). It is important to perform a culture to exclude infective causes and subsequent biopsies for histology and immunofluorescence studies.

Learning points:

The diagnosis of oral ulcers rest primarily on its duration, whether single episode or recurrence, its location, and any associated systemic symptoms. A detailed drug history is essential. For chronic ulcers, it is important to exclude infection, malignancy and immunobullous disease through appropriate investigations.

Table 3. Causes of chronic oral ulcerations

Trauma	<ul style="list-style-type: none"> • Dentures
Iatrogenic	<ul style="list-style-type: none"> • Allergy to dental fillings
Infective	<ul style="list-style-type: none"> • Bacterial • Fungal • Mycobacterial
Inflammatory	<ul style="list-style-type: none"> • Chronic erythema multiforme • Oral lichen planus • Immunobullous e.g. cicatrical pemphigoid, pemphigus, linear IgA disease, paraneoplastic pemphigus • Connective tissue disease e.g. lupus erythematosus, Wegener's granulomatosis
Malignant	<ul style="list-style-type: none"> • Squamous cell carcinoma • Melanoma • Lymphoma • Leukaemia

Cosmeceuticals: the first step in resurfacing

Speaker: Dr. Zoe Diana Draelos
Dermatology Consulting Services, High Point, North Carolina

When the term 'cosmeceuticals' was coined 25 years ago, there was controversy and argument among dermatologists. There now exists a choice among synonymous niceties and the alternatives include 'dermaceuticals', 'active cosmetics', 'functional cosmetics', having in common acknowledgement that the product contains 'active' ingredients that go beyond camouflage. Concerning the role of cosmeceuticals in resurfacing, the speaker pointed out that it could aid in five different aspects, including exfoliation of the stratum corneum, normalisation of epidermis/dermis, facilitation of barrier restoration, healing optimisation, and maintenance of the resurfacing results.

Firstly, exfoliation prior to chemical peel can assure even uptake of the acid in all facial areas and exfoliation following laser resurfacing or chemical peel or microdermabrasion can maintain skin smoothness. Some common examples of exfoliative agents are salicylic acid and lactic acid which is oil and water soluble respectively. Salicylic acid is able to exfoliate within the sebum-rich pores on the skin surface and it has no dermal penetration. It can be used in patients with sensitive skin such as rosacea. Lactic acid is able to exfoliate on the skin surface. Dermal penetration can occur and it is best used to prepare for a procedure but not post procedure due to its stinging side effect. On the other hand, particulate scrubs can be used post procedure to maintain skin smoothness. The best scrubs contain polyethylene beads to provide gentle exfoliation without milia. It can be used once weekly for maintenance. Woven face cloths can be used both pre- and post-procedure. Open weave cloth produces mild exfoliation while closed weave cloth produces aggressive exfoliation.

There is also a dual textured cloth with which the textured side of the cloth provides a mild 'syndet' (synthetic detergent or surfactant) cleanser and mechanical exfoliation to clean skin surface and the smooth side of cloth provides moisturization during rinsing through petrolatum.

Secondly, retinoids are the primary mechanism for epidermal/dermal normalisation. Many over-the-counter or prescription retinoids are available for use both pre- and post-procedures. Most of the free retinol in the skin is stored as retinyl palmitate. The oxidation of free retinol to retinoic acid is the rate limiting step in its biologic activity and retinol must associate with retinol binding protein for conversion to retinoic acid. Retinoic acid then regulates gene expression for keratinocyte growth and differentiation.

Moreover, barrier restoration is very important following resurfacing procedures. Transepidermal water loss must be reduced to control pain and create milieu for healing. It is best accomplished through the use of occlusive agents include petrolatum, cyclomethicone, dimethicone, liquid paraffin, acrylates, mineral oil and grape seed oil.

On the other hand, healing optimisation is an area of active research. There are synthetic ceramide 3 occlusive component of intercellular lipids, glycerin-based moisturizer and hyaluronic acid based moisturizer. There is a new trend in the approval of these biologically active healing agents as prescription devices in which they only need to prove safety but not efficacy. Glycerin forms a reservoir in the stratum corneum and is a potent humectant. Hyaluronic acid is also a potent humectant either topically or via injection. Any product that keeps the wound bed moist can increase fibroblast migration and aid in post-surgical wound healing.

Finally, for resurfacing maintenance, topical agents must maintain the hydration of skin

to achieve smooth surface. The water content of the skin should be 30% more. It can be accomplished by new technologies that time release occlusive and humectant substances onto skin surface. The first novel moisturizer release was liposome but they were fragile. Newer technology focuses on multilamellar vesicle with multiple concentric liposomes.

Learning points:

Cosmeceuticals play an important role in resurfacing. In summary, there are salicylic acid, lactic acid, scrubs and cloths to exfoliate; retinoids to normalise; occlusives to restore; ceramides, glycerin and hyaluronic acid to heal; and time-released moisturizers to maintain.