Hong Kong J. Dermatol. Venereol. (2011) **19**, 197-201

Reports on Scientific Meetings

Conference Essence in Dermatology 2011, Hong Kong

Reported by JWS Tang 鄧永善, WYK Lam 林旭強, EKY Yau 丘潔怡

Date: 18 September 2011
Venue: Langham Place, Hong Kong
Organisers: Elsevier Greater China and the American Academy of Dermatology

Cutaneous melanoma: poor awareness in the colored population

Speaker: Dr. Shiu-kee Hui
Dermatologist, Private Practice, Hong Kong

Case fatality ratio (CFR) is a useful tool in epidemiology and is defined by the number of deaths divided by number of new cases.

The speaker postulated that in cases where malignancy is superficially situated they can be easily noticed and treated, therefore a lower CFR would be expected in areas like skin than in deep-seated areas like the pancreas and liver. CFR in pancreatic, hepatic and pulmonary cancer is almost as high as 90% while that in cutaneous melanoma is 20% in general.

However when cutaneous melanoma alone is assessed, the number of deaths from cutaneous melanoma globally is 49527 per year and a quarter of them come from Africa and Asia where the CFR calculated is as high as 55%, whereas Australia, America and New Zealand have the lowest CFR of 11%.

Therefore, the speaker summarized that melanoma is not a disease of Caucasians. A high percentage of melanoma patients die in Africa and Asia where the CFR is more than 50%. The goal of management is to raise the awareness and management level in these countries.

Learning points:

Cutaneous melanoma is not a rare disease or a disease of the Caucasians. There should be a greater awareness in Asian and African countries in order to lower the case fatality ratio (CFR) by earlier detection and treatment.

Research becomes reality: creams, cancer therapy and the cutting edge in facial rejuvenation

Speaker: Prof. Ashish Bhatia
Assistant Professor, Clinical Dermatology, Feinberg School of Medicine, Northwestern University, Chicago, USA

LaViv is an autologous cell therapy for use in aesthetics. It has been demonstrated to improve moderate to severe nasolabial fold wrinkles in adults. A small sample of fibroblasts is removed from behind the ear through punch biopsy. After purification, the cells are then expanded through

culturing. The fibroblasts obtained are biologically active and able to produce collagen in the skin. LaViv was approved by the Food and Drug Administration in June 2011.

A novel injectable adipolytic drug, ATX-101, has been shown to reduce localized fat, such as submental fat. The drug induces formation of new collagen through adipolysis. Phase I and II studies of ATX-101 have been successfully completed.

Vismodegib, which is a hedgehog pathway inhibitor, has been used in treatment of locally advanced or metastatic basal cell carcinoma with success. Side effects were predominantly mild to moderate. It would be a potential new therapy for basal cell carcinoma.

Growth factor is emerging as a new anti-ageing therapy. The mechanism of action involves epidermal renewal and extracellular matrix regeneration. It has been shown to improve skin elasticity. The sources of growth factor include epidermal cells, placental cells, human foreskin, colostrum, recombinant bacteria, yeast and plants. There are concerns over human source of growth factor. Excessive vascular endothelial growth factor may stimulate the transition of dormant tumors to malignancy through an increase in angiogenesis. In addition, various types of melanomas have receptor for this growth factor.

Learning points:

LaViv, ATX-101, vismodegib and growth factor are new treatments in dermatology. Further studies have to be conducted to confirm the safety and efficacy of these therapeutic agents.

What's new in cosmetic dermatology?

Speaker: Prof. Henry H Chan
Hon. Professor, Li Ka Shing Faculty of Medicine, University of Hong Kong, Hong Kong

Laser fractional resurfacing is effective for skin rejuvenation and pigmentation. However, post-inflammatory hyperpigmentation may occur after laser fractional resurfacing. Study showed that both density and energy of the treatment were determinants of post-inflammatory hyperpigmentation in Asians. Density was of particular importance.

Transcutaneous focused ultrasound has been used for non-invasive skin tightening. Its safety profile was evaluated in Asians. Only mild and transient adverse events were observed in the study. There were no serious permanent or delayed adverse events up to 6 months after treatment. The author concluded that the use of transcutaneous focused ultrasound was safe in treatment of facial skin laxity in Asians. Minimally invasive radiofrequency needles have also been used for skin tightening. The needles induce a confined focal thermal injury in dermis. Thus, epidermis and dermal-epidermal junction are spared. No ulceration, erosion or pigmentary changes were noted in a study involving 11 Chinese patients. The main adverse effects were pain, inflammatory changes and bruises after the procedure.

In melasma, a study illustrated that there was a significant increase in number and size of dermal blood vessels in lesional skin. There was also an increased expression of vascular endothelial growth factor, which might play an important angiogenic role in melasma. Higher amounts of melanin and melanogenesis-associated proteins were also observed in epidermis of lesional skin by another study, in which the number of melanocyte was not increased. Regarding treatment for melasma, newer topical agents such as decapeptide-12

and elure have been evaluated. Laser therapy should be reserved for patients who are refractory to topical therapy.

Learning points:

Many new technologies and drugs are available for skin rejuvenation and treatment of melasma. It is important for physicians to be familiar with the adverse events of each treatment modality.

Treating the frame and canvas of the ageing face

Speaker: Prof. Ashish Bhatia
Assistant Professor, Clinical Dermatology, Feinberg School of Medicine, Northwestern University, Chicago, USA

Physiological changes of skin ageing include skin thinning, loss of elasticity, altered texture, pigmentation, bone resorption and remodeling. Volume loss during ageing also results in fat redistribution and muscle atrophy. Over the years, there has been much advancement in treatment of undesirable skin changes secondary to ageing.

Fractional laser technology, which leaves viable skin in between microscopic zones of thermal injury for rapid tissue regeneration and heat dissipation, is considered a safer option with less risk of post-inflammatory hyperpigmentation. This technology is categorized into ablative and non-ablative fractional laser. For ablative fractional laser, tissue vaporization and ablation of stratum corneum occur and rapid re-epitheliazation follows; non-ablative fractional laser causes collagen denaturation from papillary dermis down to mid-reticular dermis with epidermis remains intact, complete re-epitheliazation can occur in 24 hours. Both lasers have been used for skin resurfacing.

Filler is a minimally invasive treatment to correct and contour facial area by replacing depleted soft tissue, bony loss or muscle atrophy. Hyaluronic acid, which is extracted from streptococcal bacteria, is a commonly used agent for filler. Treatment effect can last for four to six months, or even longer.

Botulinum toxin A has been approved by the Food and Drug Administration for cosmetic use. It has been used to treat glabellar and frontal crease, crow's feet, depressed angle of mouth and chin dimpling. As there is potential risk of facial asymmetry after injection, treatments should be performed by experienced practitioners.

Learning points:

Fractional laser, filler and botulinum toxin A are currently available treatment modalities to combat skin changes secondary to skin ageing.

Atopic dermatitis – epidemiology, comorbidity, and treatment

Speaker: Dr. Eric L. Simpson
Director, Dermatology Department, Oregon Health and Science University, Portland, Oregon, USA

Atopic dermatitis is a global disease with high prevalence in worldwide population. It causes strong impact on patients' quality of life and can lead to significant emotional or behavioural disturbance. Pruritus in atopic dermatitis may result in sleep disturbance among patients and their families. Co-morbidities related to atopic dermatitis include other atopic diseases, skin infection, neuropsychiatric disorders such as attention deficit hyperactivity disorder, autism and depression. Aetiology of atopic dermatitis is multifactorial. Factors such as genetics, environmental factors, epidermal barrier

dysfunction and immune dysfunction are believed to contribute to the disease.

Therapeutic strategies include induction of clearance, maintenance treatment to prevent flares and flare control. Proper education to patients and their parents is mandatory to ensure good compliance and rapport. Physicians should carefully address the disease causation and give advice on steroid phobia if necessary during the initial visit. After induction of clearance by use of topical corticosteroid, severity-based maintenance therapy can help prevention of flare. For mild disease, topical corticosteroid can be applied twice-weekly in addition to adequate use of emollients for maintenance purpose; for moderate disease which has flares despite the above measures, adding topical calcineurin inhibitor has been proven to reduce flare up; in those severe and recalcitrant cases, systemic steroid therapy for flare control may be required. Other treatment modalities such as phototherapy and immunosuppressants including cyclosporine, methotrexate or azathioprine can be considered for steroid-sparing purpose.

Learning points:

Management of atopic dermatitis includes induction of clearance followed by severity-based maintenance therapy and flare control.

Therapeutic advances in skin cancer

Speaker: Dr. Eric Simpson
Director, Dermatology Department, Oregon Health and Science University, Portland, Oregon, USA

Melanoma accounts for less than 1% of skin cancer but more than 80% of skin cancer mortality with an increasing mortality rate worldwide. Risk factors for melanoma include intermittent sun exposure, dysplastic nevus, aircrew occupation, prior cancer e.g. breast and thyroid, latitude, transplant patients, arsenic exposure. Eighty percent of patients have localized disease at presentation, 2-5% already have metastasis with only a 10% 5-year survival rate.

Treatment for localized disease is mainly surgery while no treatment has been shown to increase survival in metastatic cases. Trial enrollment is the standard of care in such case.

Melanoma is an immunogenic tumor and specific treatment targeting this property has been under investigation. Ipilimumab which blocks CTLA-4 has undergone phase III study with a 32-34% reduction in risk of death compared with melanoma vaccine. Side effects include hepatitis and enterocolitis.

Vemurafenib is an oral agent which targets on BRAF inhibition in those with BRAF mutant type of metastatic melanoma. A phase III study has shows a 63% decrease in mortality risk as compared with dacarbazine. Its side effects include rash, risk of developing squamous cell carcinoma and keratoacanthoma, and ultimately drug resistance.

Imatinib is a tyrosine kinase which has been widely used in chronic myelocytic leukemia and gastrointestinal stromal tumor. Studies have shown that it could target on KIT mutation, which could be present in mucosal, acral or chronically sun damaged metastatic melanoma, with a promising prolonged median survival of 46 months.

Vismodegib is an oral drug which selectively inhibits signaling in the Hedgehog pathway by targeting a protein called Smoothened. Abnormal signaling has been implicated in advanced Basal cell carcinoma and vismodegib has shown promising result in patients with basal cell nevus syndrome.

Learning points:

Cutaneous melonoma is a fatal skin disease and carries a poor prognosis when it metastasizes. Surgery is the mainstay of treatment in localized disease while chemo or immunotherapy trial remains the option in metastatic cases. Several novel immunotherapies which target different mutant genes and pathways in metastatic melanoma are underway and show promising results.

Announcement

Application for Annual / Interim / Exit Assessment, June 2012 Specialty Board of Dermatology& Venereology Hong Kong College of Physicians

Please be reminded that the application for the Annual / Interim / Exit Assessment, June 2012 is now open to the eligible candidates, who should be:

1. Registered trainees in Dermatology & Venereology, Hong Kong College of Physicians
2. Qualified for / will be able to qualify for the Annual / Interim / Exit Assessment by 30 June 2012

Those who wish to attend the Assessment should complete the Higher Physician Training (HPT) Annual / Interim Assessment Application Form or the Higher Physician (HPT) Exit Assessment Application Form plus Testimonial to the Examination Co-ordinator of the Specialty Board of Dermatology & Venereology on time according to the requirement of HKCP. You may refer to the website of Hong Kong College of Physicians www.hkcp.org/ for detail. Late applicant will not be able to sit for the assessment.

Dr. HO King-man
Chairman
Specialty Board (Dermatology & Venereology)
Hong Kong College of Physicians