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Reports on Scientific Meeting

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Reported by NM Lau 劉顏銘, WH Leung 梁衛紅, PY Ngan 顏佩欣, CK Wong 黃之鍵, LP Wong 王麗萍

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Venue: Sheraton Hong Kong Hotel & Towers, Tsim Sha Tsui, Hong Kong
Organiser: Hong Kong Society of Dermatology and Venereology

Genodermatoses – A practical approach

Speaker: Mark Koh
KK Women's and Children's Hospital, Singapore

The speaker divided his lecture into three parts: 1) The blistering baby, 2) The red and scaly baby, 3) The baby with suspected genodermatoses.

1. The blistering baby. The case presented was a two-day-old baby with epidermolysis bullosa presenting with blisters and erosions since day 1 of life. In the management of newborns with blistering disorders, other differential diagnoses e.g. sucking blister, herpes infection, bullous impetigo and bullous mastocytosis should be borne in mind. In the history, significant family history, early infant/childhood death and consanguinity should be asked for. If indicated after the clinical examination, the following investigations may be considered: microbiological investigation, histology, immunofluorescence mapping, electron microscopy, mutation analysis or genetic testing. The management of epidermolysis bullosa includes: prevention of blisters, wound care, pain control, feeding nutrition, management of infection, prevention of contractures, dental care, surveillance for squamous cell carcinoma, genetic counselling, gene therapy and cell therapy.
2. The red and scaly baby. A one-day-old baby presented with cellophane-like membrane from birth. The management approach in history taking, physical examination and investigation of babies with congenital ichthyoses is similar to the "blistering baby". The use of a humidified incubator, abundant emollients and multi-disciplinary approach is necessary.
3. The baby with a suspected genodermatosis. In managing a baby with a suspected genodermatosis, history and physical examination are important to aid diagnosis. The clinical features should be noted, continuous follow-up, collaboration with colleagues from other specialties, and literature search. Whole exome/genome sequencing as last resort is usually helpful in determining the diagnosis.

Learning points:

Genodermatoses encompass a wide range of inherited skin disorders which can range from very mild to very severe. Diagnosis requires both clinical and investigational correlation. With the use of genomic testing, the diagnosis can be made much faster. After the diagnosis is made, genetic counselling should be offered.

Oral lichen planus

Speaker: Kazuyuki Tsunoda
Department of Dentistry and Oral Surgery, Keio University School of Medicine, Japan

The speaker gave an overview of oral lichen planus (OLP) and oral lichenoid reactions (oral lichenoid drug reactions and oral lichenoid contact reactions).

OLP can present bilaterally at the buccal mucosa or gingiva. It can be divided into "white" or "red" according to the clinical manifestation. For "white" OLP, it is the most common presentation and mainly asymptomatic. It appears as white, reticulated patches or plaques at the buccal mucosa or dorsum of tongue. For "red" OLP, it can be atrophic, bullous or presents as painful erosions and ulcers. The differential diagnosis of OLP include: oral cancer, aphthous ulcer, paraneoplastic pemphigus, erythema multiforme, and graft-versus-host disease. In managing OLP, the general principles are: oral care, hygiene and management of oral candidiasis. In mild to moderate OLP cases, e.g. "white" LP, topical corticosteroid +/- occlusive dressing technique may be used. In severe OLP cases, e.g. "red" OLP, topical cyclosporine, cyclosporine gargle, topical calcineurin inhibitors or systemic corticosteroid may be necessary. Some patients with OLP may have complete remission, while some may progress to malignancy. Regular follow-up of patients is therefore necessary.

While most OLP is idiopathic, oral lichenoid drug reactions (OLDR) and oral lichenoid contact reactions (OLCR) can be improved when the underlying drug or allergen is removed. Therefore a drug history must be obtained from the patient to rule out OLDR. Patch testing can be done to rule out OLCR.

Learning points:

Lichen planus is an inflammatory disorder that can affect both the skin and oral mucosa. Cutaneous lesions have been reported in around 20% of patients with OLP. The liaison of dermatologists and dentists is necessary in the diagnosis and management of this condition. More attention should be paid on "red" OLP and in refractory cases and regular follow-up is needed to monitor for malignant change.

Optimising treatment for psoriasis – Which biologic is best fit for your patients?

Speaker: Alice Gottlieb
Tufts Medical Center, USA

Psoriasis is an immune-mediated disorder with dysregulation of the immune system and keratinocyte dysfunction. Various cytokines, including interferon-alpha, IL-23 and IL-12, play a major role in the pathogenesis of psoriasis. Biologic agents are important treatment modalities for moderate to severe psoriasis. They generally have good efficacy and favourable tolerability. The available treatment options include TNF-blockers (etanercept, infliximab, adalimumab), anti-IL-23 blockers (ustekinumab, guselkumab, tildrakizumab, and risankinumab), and anti-IL-17A (secukinumab and ixekizumab). Certolizumab, a new TNF blocker, has recently been included into the treatment of psoriasis.

Learning points:

Biologic agents generally have good efficacy and favourable tolerability in the treatment of moderate to severe psoriasis.

STI in pregnancy

Speaker: Roy Chan
National Skin Center, Singapore

Intrauterine or perinatally transmitted sexually-transmitted infections (STIs) can cause severe complications in pregnant women and their babies, including stillbirths, preterm labour, and foetal infections. Most of the affected patients are asymptomatic and STIs may only be detected by screening. Recommendations for screening of STI in pregnant women are based on cost, epidemiology, disease severity and complications. Early detection and treatment for syphilis and HIV infection in pregnancy has reduced the risk of mother-to-child transmission. Nucleic acid amplification testing (NAAT) based point-of-care tests for *Chlamydia trachomatis* and *Neisseria gonorrhoeae* can significantly improve control of these STIs in pregnancy.

Learning points:

Pregnant women affected by STIs can be asymptomatic and screening of STIs is important for early detection and treatment.

Asymptomatic chlamydia and gonorrhea infections among MSM in Hong Kong

Speaker: Perry CT Chau
Dermatologist, Private Practice, Hong Kong

Chlamydia trachomatis (CT) and *Neisseria gonorrhea* (GC) infections are the two most common sexually transmitted infections (STIs). Most of these STIs are asymptomatic when they occur in the rectum or pharynx which can serve as a reservoir for further spread. There are various guidelines in different countries regarding screening of these STIs among men who have sex with men (MSM), based on their local prevalence study of CT and GC infections at different anatomical sites among MSM.

A study conducted in the Social Hygiene Clinics of Hong Kong in 2015 revealed a substantial amount of MSM (19.6%) had asymptomatic CT and GC infections from any of three anatomical sites (urethra, rectum or pharynx). The rectum was found to be the most frequently infected site followed by the pharynx. Around 75% of total asymptomatic infections could be picked up with nucleic acid amplification test (NAAT) by screening the rectum alone and 90% if screening was performed over both the rectum and the pharynx. Since the bacterial load of asymptomatic infection is usually very low, GC culture is not sensitive enough for detection and thus not recommended to be performed for screening purposes.

Learning points:

A substantial number of asymptomatic CT or GC infections are detectable by routine screening among MSM in Hong Kong. Extra-genital screening especially from the rectum is therefore important.

Efficacy of vibration-assisted anaesthesia in intralesional steroid injection for keloid

Speaker: Ka-lai Yuen
Dermatologist, Private Practice, Hong Kong

Intralesional steroid injection remains the most common treatment of keloids. A major disadvantage is the pain associated with injection and can lead to patients refusing further injections.

The author conducted a study in 2015 to investigate the efficacy of vibration-assisted anaesthesia with a non-invasive commercially available massager for pain relief during intralesional steroid injection for keloids. Eligible patients attending the Social Hygiene Service were given the same dosage of intralesional steroid solution at two different areas of a single

keloid with and without a vibration device. The sequence of intervention was randomised. The area and thickness of injection sites were measured. The same physician administered all the injections. Patients' subjective pain scores and their preference for vibration technique were recorded.

Sixty-six patients completed the study. The median pain score on the control side (without vibration) was 6.75 versus 4 on the intervention side (with vibration). Overall, there was statistically significant pain score reduction with the use of vibration-assisted anaesthesia. About 82% of patients in this study preferred vibration-assisted anaesthesia for future intralesional steroid injection and 76% of patients agreed that vibration-assisted anaesthesia made intralesional steroid injection more acceptable.

Learning points:

This study demonstrated that vibration-assisted anaesthesia was a safe and effective means of achieving clinically significant pain reduction for patients receiving intralesional steroid injection for keloids.

Immunobullous diseases in oral cavity

Speaker: Kazuyuki Tsunoda
Department of Dentistry and Oral Surgery, Keio University School of Medicine, Japan

Oral mucosal diseases are easily visible and are often characterised by non-specific inflammation and secondary infection. They also induce physical stress to patients. Although uncommon, the oral cavity is affected by autoimmune diseases. For instance, oral mucosa is always involved in pemphigus vulgaris (PV). The majority of cases initially present with lesions in the oral mucosa. Some patients with mucosal dominant PV may have concomitant minimal skin lesions. Buccal mucosa and gingiva are frequently affected. Severe lip involvement and heterogenous lesions are typical of paraneoplastic pemphigus.

Mucous membrane pemphigoid is another autoimmune disease which mainly affects the gingival mucosa. Sometimes, gingival blisters can be seen. Around 20% have concomitant skin involvement.

The desmoglein (Dsg) anti-skin antibodies in affected patients' serum, detected by enzyme-linked immunosorbent assay (ELISA) test can also assist in the diagnosis of pemphigus. The Dsg 1 and Dsg 3 provided objective and quantitative data which allow differentiation of PV. Furthermore, the circulating autoantibodies against BP180 and anti-laminin-332 are also helpful in the diagnosis of mucous membrane pemphigoid.

Learning points:

The clinical manifestations, histological and serological features, pathogenesis and biological behaviour are all useful in the diagnosis of various autoimmune diseases of the oral cavity. Due to their potential of causing severe or life-threatening conditions, early diagnosis and interventions are warranted.

Oral mucosal disease

Speaker: Franklin Chan
Private Practice, Hong Kong

Diseases of the oral mucosa can be due to a local condition, or a manifestation of systemic disease. Local oral mucosal diseases are often related to, or influenced by, the state of the dentition, which is unique in oral environment. Various systemic diseases present with mucosal manifestations, for instance, nutritional deficiencies, toxicological conditions, or blood

dyscrasias. The speaker shared some common oral mucosal diseases features.

One of them was recurrent aphthous ulcer. It commonly affects the general population. The three main varieties are minor aphthous ulcer, major aphthous ulcer and herpetiform aphthous ulcer. Minor aphthous ulcer is the most common form, which can occur in any site of the oral mucosa. There can be one or a few lesions, with a few millimetres in diameter. Usually it heals spontaneously within one to two weeks without scarring. Major aphthous ulcer is less common with larger size (over 1 cm in diameter). It persists for a longer period of time, up to six weeks with considerable scarring. Herpetiform aphthae are also less common with crops of small but numerous ulcers. It may coalesce into a large and shallow ulcer. Other than ulcers, mucosal swellings, premalignant and carcinogenic conditions in oral cavity were discussed.

Learning points:

The oral mucosa shares many of the structural and functional properties with the skin. While the surrounding environment of the skin is normally dry, the oral mucosa is often bathed in saliva to stay healthy. Problems arise if this natural environment is reversed, for the skin or the oral mucosa.

Paediatric pigmentary diseases, including vitiligo

Speaker: Yoke-chin Giam
National Skin Centre, NSC National Health Group, Singapore

The approach to pigmented disorders in children was discussed. The pathophysiology of hypopigmented disorders includes biology of pigmentation and disorders at development and differentiation, migration/maturation/replication, and production/packaging/distribution. Defects in migration of melanoblasts from neural crest to the skin result in diseases such as piebaldism or Waardenberg syndrome. An algorithm to investigate for multiple lentigines was discussed. The recognition of organ involvement will help in the diagnosis. For Peutz-Jeghers syndrome, it is important to follow up the patient over time and to screen for the occurrence of gastrointestinal malignancies. In piebaldism, it is important to perform a head to toe examination to differentiate it from vitiligo. In children with suspicion of oculocutaneous albinism, it is also important to follow them up over time for progression. Chediak-Higashi syndrome is a differential diagnosis of oculocutaneous albinism. It is also imperative to consider conditions such as pityriasis alba, phytophotodermatitis, dyschromia pigmentosa, leprosy and linear and whorled nevoid hypermelanosis when pigmentary diseases are encountered.

Learning points:

Good history, experience and long-term follow-up are important to differentiate among the disorders. Mutational studies are required to confirm some of the diagnoses.

What's new in paediatric dermatology

Speaker: Yoke-chin Giam
National Skin Centre, NSC National Health Group, Singapore

Coxsackie A6 has emerged as the pathogen causing atypical presentations of hand foot and mouth disease in Singapore. The disease is more severe, associated with high fever, post-illness onychomadesis and is more frequent during winter months. Zika virus infection is associated with a non-specific maculopapular rash. It is important to illicit a travel history in

patients suspected of being infected with Zika virus. High definition optical coherent tomography and confocal tomography microscopy are new imaging studies that allow visualisation of the skin with 3D technology and have the potential to avoid skin biopsy. Annular urticaria is usually caused by viral or drug causes. The differences between urticaria multiforme and erythema multiforme were highlighted. The role of interferon-alpha antagonists in the development of non-tuberculous mycobacterial infections was also highlighted. The case of a patient who presented with enlarged lymph nodes together with a pin-point and purpuric rash demonstrating necrotising granulomatous inflammation was discussed. The case of oligosaccharides in cow's milk formula causing anaphylaxis in children and adult was also discussed. Methylisothiazolinone as an allergen in disposable wet wipes causing perianal dermatitis was also discussed.

Learning points:

Atypical clinical presentation in hand, foot and mouth disease should alert the clinician to emerging pathogens. The use of wet wipes in children is associated with contact dermatitis due to methylisothiazolinone.

A new look at eczema long-term treatment

Speaker: Michael Cork
Department of Infection, Immunity and Cardiovascular Disease, University of Sheffield, United Kingdom

Atopic dermatitis is the result of interplay between genetic susceptibility, sub-clinical skin barrier defect, sub-clinical inflammation and the interaction with potential irritants and allergens. A defective skin barrier may result from a deficient profilaggrin presence due to genetic susceptibility, leading to less Natural Moisturising Factor, high pH and hence degraded corneodesmosomes and breakdown in lipid lamellae.

It is important to know that emollients with a good formulation are used to repair the defective skin barrier as a first step. All harsh soaps and detergents should be avoided, and replaced with emollient wash products. Furthermore, irritant and allergens should be avoided. Finally, the management of atopic dermatitis requires the treatment and prevention of flares using a combination of topical corticosteroids and topical calcineurin inhibitors. The optimal way to combine these therapies in flares and in quiescent phases of atopic dermatitis to reduce sub-clinical inflammation was discussed.

Learning points:

Management of atopic dermatitis includes ways to repair defective skin barrier, avoidance of irritants and allergens and optimal use of topical therapies in flares and in quiescent phases.