

Reports on Scientific Meetings

Annual Scientific Meeting of the Hong Kong Society of Dermatology and Venereology 2009 (Part 2)

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Date: 21 June 2009
Venue: Sheraton Hong Kong Hotel
Organiser: The Hong Kong Society of Dermatology & Venereology

Clinical management of childhood atopic eczema in perspective

Speaker: Dr. King-man Ho

Acting Consultant, Social Hygiene Service, Centre for Health Protection, Department of Health, Hong Kong

Defining atopic eczema

Diagnostic criteria of atopic dermatitis have been established particularly for research purposes. Commonly used ones include the UK Working Party's Diagnostic criteria and Hanifin and Rajka's criteria. For the UK criteria, it includes itchy skin condition plus three or more of the followings: 1) history of involvement of skin crease, 2) history of asthma or hay fever in the patient or history of atopy in a first degree relative, 3) history of general dry skin in the past year, 4) visible flexural eczema and 5) onset during the first 2 years.

For clinical purposes, not all criteria are fulfilled by individual patient. It is important to exclude other causes of pruritic dermatosis before establishing the diagnosis of atopic eczema clinically. It is a common disease with prevalence of 10-20% in children and 1-3% in adult. About 70% of the patients will remit after age of seven.

Pathophysiology

The exact role of various pathogenic factors in the development of atopic eczema is still controversial. Genetic predisposition is a well known contributing factor. Defective epidermal barrier function may provide a route for entry of allergen, irritant and infectious organism. Filaggrin is present in the epidermis and it serves to aggregate the keratin filaments. Filaggrin gene mutation may play an important role in the pathogenesis. Presence of filaggrin gene mutation in atopic eczema will increase the risk of developing subsequent asthma. There is a swinging pendulum for the role of T helper 1 and T helper 2 cells in the immunopathogenesis of atopic eczema. Several factors may influence T helper cell polarization.

Clinical management

Topical steroid remains the first line treatment in atopic dermatitis. Adequate explanation of indications and side effects to patients and their parents is needed to avoid steroid phobia. The potency of topical steroid was divided into 4 classes in the UK classification system. One percent hydrocortisone was used as the baseline potency and it was classified as Class 4 agents. The class 3 agents have a potency of 2-25 times higher than 1% hydrocortisone, while the class 2 and class 1 agents are 50-100 and 600 times higher respectively. Twice or single daily application of topical steroid is usually used. Fingertip unit (FTU) may be used to quantify the amount of topical steroid application: 1 FTU for hand and groin; 2 FTU for face and foot; 3 FTU for arm; 6 FTU for leg and 14 FTU for trunk

(2 FTU=1 g). Side effects of topical steroid in children are sometimes unpredictable. Severe adverse effect like adrenal suppression may happen even from newer generation topical steroid. There is definite risk for unrestricted long term use of topical steroid.

Staphylococcus aureus (*S. aureus*) is commonly colonized on moderate to severe eczematous skin. Staphylococcus exotoxin may play a role as a superantigen which stimulates the immune response. It is still controversial whether *S. aureus* causes the disease flare or the excoriated wound with exudation attracts *S. aureus* as a bystander.

For clinical management, it is worthwhile to treat the possible infection empirically without waiting for the culture and sensitivity result. Interestingly, treating the excoriated eczema with topical steroid is still effective to clear *S. aureus*.

Skin prick test for allergens in atopic eczema may only be useful in selected cases. The test has a high negative predictive value; however, the positive predictive value is only 50%. It will be reassuring for having negative result but positive result may not indicate true allergy. Cross reactivity to different test agents is possible and standard local environmental food is not available for testing.

Learning points:

Filaggrin gene mutation may play an important role in the pathogenesis of atopic eczema. Topical steroid is the mainstay of treatment. Side effect may occur even for the newer generation topical steroids. Adequate explanation in the practical usage and side effects of topical steroid to the patients is needed.

Cutaneous lymphoproliferative disorders

Speaker: Dr. Nigel Trendell-Smith
Senior Medical Officer, Department of Pathology,
Queen Mary Hospital, Hong Kong

A variety of T-cell and B-cell lymphoid neoplasms can involve the skin, either primarily or secondarily. The term "primary cutaneous lymphoma" refers to cutaneous T-cell lymphomas (CTCLs) and cutaneous B-cell lymphomas (CBCLs) that present in the skin with no evidence of extracutaneous disease at the time of diagnosis. After the gastrointestinal tract, the skin is the second most common site of extranodal non-Hodgkin lymphoma, with an estimated annual incidence of 1:100,000. Primary cutaneous lymphomas were previously classified by the European Organization for Research and Treatment of Cancer (EORTC) classification or the World Health Organization (WHO) classification, but both have their own shortcomings. In particular, difference in the classification of cutaneous T-cell lymphomas other than mycosis fungoides, Sezary Syndrome, the group of primary cutaneous CD30+ lymphoproliferative disorders and the classification and terminology of different types of cutaneous B-cell lymphomas had resulted in considerable debate and confusion. Thus the WHO-EORTC 2005 classification of cutaneous lymphomas, a consensus agreement of both systems, was a major step forward in the evolution of the classification and characterization of primary skin lymphoid neoplasms.

The speaker illustrated the variety of primary cutaneous lymphomas with presentation of various cases, ranging from benign "reactive" conditions, borderline lymphoid dyscrasias to frank lymphoma. Diagnostic difficulties encountered in relation to histopathology, immunohistochemistry and recent advances in molecular pathology were also discussed.

Learning points:

The WHO-EORTC 2005 classification marked a major step forward in the evolution of the classification and characterization of primary skin lymphoid neoplasms. Appreciation of the clinical spectrum of lymphoproliferative disorders is important in the management of primary cutaneous lymphomas.

significant association between *M. genitalium* infection and NGU. There might be a type II error due to the low prevalence of *M. genitalium* detected and small sample size in this study.

Larger studies will be necessary to determine the prevalence of *M. genitalium* infection in the local population, especially for high risk groups. Such epidemiological data is essential before an evidence-based decision can be made on whether to introduce this diagnostic test into the local sexually transmitted disease clinics.

Genital mycoplasma infection

Speaker: Dr. Robin CW Su

Acting Senior Medical Officer, Social Hygiene Services, Department of Health, Hong Kong

Genital mycoplasmas are found in genito-urinary tract of sexually active adults, these include *Mycoplasma genitalium* (*M. genitalium*), *Mycoplasma hominis* and *Ureaplasma urealyticum* (UU).

M. genitalium has an unequivocal and significant association with non-gonococcal urethritis (NGU), especially in Chlamydia negative NGU. *M. genitalium* is sexually transmitted with transmission rates comparable to that in Chlamydia.

Tetracycline has been the treatment of choice for NGU due to its good clinical efficacy for Chlamydia infection; however, clinical studies have showed that tetracycline does not always eradicate *M. genitalium*. Reports suggest azithromycin is the treatment of choice for *M. genitalium* urethritis.

There is accumulating evidence showing that *M. genitalium* causes cervicitis, and further studies are needed to establish its causative role for upper genital tract infection in women.

Owing to the non-availability of standardized commercial test kit, testing for *M. genitalium* in the western world is limited to a few centers only. A recent study in Hong Kong failed to show any

Learning points

M. genitalium has an unequivocal and significant association with NGU, independent of Chlamydia. It responds poorly to tetracyclines and azithromycin is the first line treatment for *M. genitalium* infection. Larger studies are needed to determine the prevalence of *M. genitalium* infection in the local population and its causative role for upper genital tract infection in women.

Human papillomavirus: an update on local epidemiology and prophylactic vaccines

Speaker: Prof. Paul KS Chan

Associate Professor, Department of Microbiology, The Chinese University of Hong Kong, Hong Kong

Cervical cancer remains as the second most common female cancer worldwide. More than 500,000 new cases are recorded each year, with more than half of them occurring in Asia. Given the strong aetiological link between high-risk human papillomavirus (HPV) infection and the development of cervical cancer, it is possible to prevent cervical cancer by controlling HPV infection. Recently, two prophylactic HPV vaccines have been approved for clinical use.

The current HPV vaccines cover two high-risk HPV types, HPV 16 and HPV 18. These two types account for about 70% of cervical cancer worldwide. The distribution of HPV types varies geographically, and is dependent on the histological type of cancer. Local data on the distribution of HPV types is therefore important for assessing the cost-benefit of HPV vaccines. There are still debates on applying HPV vaccines for mature women elder than the approved age limit. The main obstacle is the incomplete efficacy data being available at the present moment. The uncertainty associates with this inadequate information should be weighted against the urgency in protecting these women. Understanding on the local epidemiology of HPV infection and cervical lesion among mature women will assist counseling.

A few interesting features about HPV infection and cervical diseases in Hong Kong have been

observed. For instance, two worldwide less common types HPV 52 and HPV 58 that are not covered by vaccines are circulating locally in high prevalence. Furthermore, a second peak of genital HPV infection in older women (around 45-50 years old) is followed by a second peak of invasive cervical cancer (around 66-70 years old). This has strong implication to screening and vaccine usage.

Learning points

Two worldwide less common types, HPV 52 and HPV 58, that are not covered by vaccines are circulating locally in high prevalence. A second peak of HPV infection in older women, followed by a second peak of invasive cervical cancer, has strong implication to screening and vaccine usage.

Corrigendum

On page 157 of the "Report on Scientific Meetings" published in the Autumn 2009, the following errors need correction:

The Chinese name for the reporter of AWM Au should be 區慧明.

Apologises for this error and any inconvenience that may have caused.

Histopathology Meeting

Reported by LP Wong 王麗萍

Date: 20 June 2009
 Venue: Lecture Theatre, 12/F, Block R,
 Queen Elizabeth Hospital
 Organiser: Hong Kong Society of
 Dermatology and Venereology
 International Academy of
 Pathology (HK Division)

Spitz naevi, atypical variants and childhood melanoma

Speaker: Prof. Martin Mihm
 Professor, Department of Pathology, Harvard
 Medical School, USA

Spitz naevus

Spitz naevus usually presents with a dome-shaped papule or nodule with a pink-tan or reddish colour. The most common site is on the face. The growth is usually rapid. Histologically, nests of large epithelioid cells, spindle cells or both are present. They extend from the epidermis into the reticular dermis in an inverted wedge configuration. The closely apposed nests of cells within a uniformly hyperplastic epidermis gives rise to a "raining down" appearance. The dermal collagen is orderly infiltrated by these nests or cells with so-called maturation (gradual decrease in nuclear and cellular sizes). Treatment is complete surgical excision.

Spindle cell naevus

Pigmented spindle cell naevus presents as a black or dark plaque, sometimes it can be dome-shaped. The size is usually 2-6 mm in diameter. It is most commonly located on proximal extremities or the trunk. Classically, it

is found in young adults or children. This condition is a spindle cell variant of Spitz naevus.

Atypical Spitz tumour

Atypical Spitz tumour is usually greater than 1 cm in size, asymmetrical, with poor demarcation in morphology. Histologically, there is irregular nesting and deep extension. Treatment comprises conventional melanoma therapy, together with sentinel lymph node biopsy for high risk lesions.

Spitzoid melanoma

It is a type of nevoid melanoma that shows histologic features of Spitz naevus. Usually, it presents at the head and neck region in children. Treatment comprises conventional melanoma therapy. Sentinel lymph node biopsy for lesions of thickness greater than 1 mm is needed.

Childhood melanoma

Childhood melanoma is a rare disease with an estimated incidence of one per million per year. The majority of melanomas arise in association with precursor lesions, follow-up of children with congenital and/or dysplastic naevi is recommended. Histologically within the tumour cells, there is severe pleomorphism, numerous dermal and marginal mitoses, vascular and lymphatic invasion.

Learning points

Spitz naevus, spindle cell naevus, Spitzoid melanoma and melanoma may be present in children. A high clinical suspicion is necessary and surgical excision is needed.

Clinicopathological cases from St. John's – Part I

Speaker: Dr. J. Eduardo Calonje
Director, Department of Diagnostic Dermatopathology,
St. Thomas's Hospital, UK

Dr. Calonje presented several interesting cases from St. John's Hospital

Case 1

A 34-year-old pregnant lady presented with a firm, ulcerated nodule over forehead. She had history of anaplastic oligodendroglioma and was treated with surgery and radiotherapy four years ago. Skin biopsy showed it was osteosarcoma of the skin. Osteosarcoma can be primary or secondary to radiotherapy.

Case 2

A 28-year-old gentleman, being HIV antibody positive, presented with a six months' history of pruritic nodular lesion over the right ear. There was also some hearing loss. Skin biopsy and special staining (Grocott methenamine silver) were performed and the result was otic pneumocystosis, caused by *Pneumocystis jiroveci*. Pneumocystosis is the most common opportunistic infection in AIDS patients. However, extra-pulmonary pneumocystosis is uncommon. The clinical presentation is hearing loss, vertigo, tinnitus and otalgia.

Case 3

A 40-year-old lady presented with an asymptomatic nodule over her right thigh for 13 months. Skin biopsy result was cutaneous perivascular epithelioid cell tumour (PEComa). It is a type of mesenchymal tumour consisting of perivascular epithelioid cells (PECs).

Case 4

A 25-year-old lady presented with an asymptomatic, slowly growing tumour over the right wrist. Skin biopsy showed primary cutaneous clear cell sarcoma (malignant melanoma of soft tissues). It is a relatively rare condition that occurs in adolescents or young adults. It presents commonly at cutaneous site

of distal extremities and rarely at gastrointestinal tract or bone. This condition is prone to local recurrence and metastasis with a death rate of about 70%. Histology shows nests of oval to spindle cells with vesicular basophilic nuclei, eosinophilic to clear cytoplasm. Multinucleated giant cells and melanin are frequently seen.

Case 5

It was a case of incontinentia pigmenti presented as an subungual growth. It is an X-linked dominant disorder that follows Blaschko's line. It involves ectodermal tissues of different systems. Skin, hair, nail, teeth, eye and central nervous system may be involved.

Case 6

Dr. Calonje presented a case of ectopic meningeal hamartoma. It usually presents as a cutaneous or subcutaneous nodule or plaque on the scalp. It is a congenital disorder but may only be recognized at childhood or adolescence.

Case 7

A patient presented with a persistent, painful subcutaneous nodule at the vaccination site. Skin biopsy showed characteristic histiocytes with violaceous granular cytoplasm. It is a case of aluminum granuloma, due to hypersensitivity to an ingredient of vaccine.

Case 8

It is a case of subcutaneous panniculitis-like T cell lymphoma. Clinically, it presents as an erythematous or violaceous subcutaneous nodule or plaque. Ulceration is uncommon. Hepatosplenomegaly, coagulopathy and systemic symptoms, e.g. fever, myalgia and weight loss, may be present.

Learning points

Skin biopsy should be performed to patients with persistent lesions. Clinical and pathological correlation is needed for the diagnosis of skin diseases.

Metabolic syndrome link to psoriasis and role of topical therapy in long-term treatment of psoriasis

Reported by SKF Loo 盧景勳

Date: 17 August 2009
 Venue: Langham Place, Mongkok, Hong Kong
 Speaker: Professor John Koo
 Professor, UCSF Department of Dermatology, San Francisco, California
 Organiser: The Hong Kong Society of Dermatology and Venereology

Issues concerning the co-morbidities in psoriasis and the way for optimization of topical treatment were discussed in the presentation.

Psoriasis and cardiovascular co-morbidities

Psoriasis is a common, chronic, systemic inflammatory skin disease and it has tremendous negative impact on patients' daily life. Besides, there is substantial epidemiological evidence to suggest that psoriasis is associated with various cardiometabolic risk factors and cardiovascular diseases. Psoriasis is associated with hypertension, diabetes mellitus, hyperlipidaemia and metabolic syndrome in various population based epidemiological studies. It has also been shown that severe psoriasis is associated with increased risk of myocardial infarction after controlling for the traditional cardiovascular risk factors.

Various factors may play a role in the linkage. Lifestyle, alcoholism, systemic treatment and particularly underlying chronic inflammation may all contribute to the increased cardiovascular risk.

Topical therapy in psoriasis

There is a wide variety of manifestation of psoriasis, ranging from limited area of

involvement to erythroderma. Fortunately, majority of the psoriasis patients are suffering from limited disease and the disease can be controlled with topical medication. Compliance is the key issue for success of topical therapy. However, patients' compliance to topical medication tends to decline with time. Patients are unlikely to comply with complicated treatment regime as well.

Single daily application of effective treatment will improve the drug compliance. Commercial combination of calcipotriol and betamethasone (Daivobet® ointment) is available and it is shown to be effective in controlling localized disease. For patient with more generalized disease affecting body surface area of 10-20%, trial of Daivobet® ointment for 4 weeks can be used before initiating systemic treatment for disease control. After satisfactory disease control, frequency of topical treatment can be reduced and maintenance topical treatment twice per week may be used.

The advantage of topical combination treatment, Daivobet® ointment, includes: 1) quick onset of action and clinical improvement may be observed within one week, 2) safety data of Daivobet® ointment is available up to 52 weeks and 3) proven efficacy for once daily application, which may enhance drug compliance.

Learning points

Psoriasis is more than skin deep. Current evidence suggests that psoriasis is linked to various cardiovascular co-morbidities. There are 3 key factors for effective topical psoriasis treatment: efficacy, safety and compliance.