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Reports on Scientific Meeting

The 9th CUHK Dermatology Symposium & Social Hygiene Symposium

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Organisers:	Dermatology Research Centre, CUHK and Social Hygiene Service, Centre for Health Protection, Department of Health

Inflammatory dermatoses

Speaker: Dr. Wing-Yin Lam
Consultant Pathologist, Department of Pathology, Tuen Mun Hospital, Hong Kong

An algorithmic method by pattern analysis, with an initial observation made with scanning magnification (objective <2.5 x), is useful in arriving at a specific diagnosis of a skin biopsy, The five assessment steps for inflammatory dermatoses are:

1. Identify the procedure whereby the specimen was removed
2. Note the anatomic site of the biopsy
3. Ascertain the age
4. Determine the nature of the fundamental pathologic process in the section under scrutiny
5. Define the precise pattern of inflammatory cell infiltrates. The nine basic histologic patterns of inflammatory skin disease are :
   i. Superficial perivascular
   ii. Superficial and deep perivascular
   iii. Nodular and diffuse
   iv. Vasculitis
   v. Intraepidermal vesicular and pustular
   vi. Subepidermal vesicular
   vii. Folliculitis and perifolliculitis
   viii. Fibrosing
   ix. Panniculitis

Once the skin disease has been recognised as being inflammatory at scanning magnification, and type of inflammatory pattern defined with further sub-classification according to the architecture and cytologic attributes, specific diagnosis is often possible.

Learning points:

An algorithmic method by pattern analysis is useful in arriving at a specific diagnosis. The nine basic histologic patterns of inflammatory skin disease are introduced and discussed.

Iatrogenic dermatological complications: what every dermatologist should know

Speaker: Dr. Mildred Wat
Medical & Health Officer, Social Hygiene Service, Centre for Health Protection, Department of Health, Hong Kong

Adverse drug reaction with skin manifestation is a common problem encountered by dermatologists and can present variably as a challenge in diagnosis. Serious conditions like Stevens-Johnson Syndrome and toxic epidermolysis necrosis, or drug rash with eosinophilia and systemic symptoms (DRESS) need prompt recognition and specific treatment with intravenous immunoglobulin and systemic steroids respectively to reduce mortality. Others examples include exanthematous drug eruption, fixed drug reactions. High-risk drugs include allopurinol, penicillin, cephalosporin, anticonvulsants, non-steroid anti-inflammatory drugs and sulphonamide. History is the key to diagnosis and red flag signs like constitutional symptoms, mucosal involvement should be borne in mind during the clinical examination.

New targeted chemotherapy, namely epidermal growth factor receptor inhibitors (e.g. Tarceva, Iressa) can cause a range of cutaneous side-effects such as papulopustular eruption which responds to topical and systemic antibiotics, nail changes like periungual granuloma which responds to chemical cauterisation or antibiotics and, curly and brittle hair which resolve after drug discontinuation. Small molecules multikinase inhibitors (e.g. Sorafenib, Sunitinib) can cause hand-foot skin reactions and secondary skin cancer.

Dermatologists often give treatments, surgical procedures to patients with skin problems for health or cosmetic reasons. This could generate dissatisfaction from patients and undesired complications if disease severity, patients' perception, considerations and expectation, treatments' indications and potential side effects are not properly communicated and discussed with the patient.

Ultra-violet light exposure is notorious for skin cancer and photo-ageing; however, it is also known to be a source of vitamin D which is essential for skeletal, neurological, cardiovascular and cancer protection. The American Academy of Dermatology in 2010 advised that comprehensive photoprotection is recommended, and vitamin D should be obtained from diet and supplements instead.

Learning points:

Every treatment has potential complications. Accurate diagnosis, a mutually well-defined objective of treatment between the patient and doctor, and explanation about the potential side-effects are the key to minimising iatrogenic adverse reactions. Vitamin D is important for health but sun protection is also crucial for skin health. Diet and oral supplements may be a good source instead of sun exposure alone.

Medico-legal issues in dermatology practice

Speaker: Dr. Sau-Yan Wong
Consultant Surgeon, Division of Plastic Surgery, Department of Surgery, The Chinese University of Hong Kong, Hong Kong

Complaints of clinical negligence are seen in every specialty, and as expected they are more common in aesthetic and dermatological practices. Litigation is costly, lengthy and miserable. In dermatological practice, misdiagnosis such as missing skin malignancy, wrong management like no valid consent, delayed referral or no skin biopsy taken, and wrong medication like no allergy cross-check and wrong duration or dosage are common risky areas that would entail lawsuits.

Negligence requires four elements: established doctor patient-relationship, being negligent in care, causation and damage. Patients often ask for claims not only because they want

compensation, but they are also looking for accountability, explanation and an improved standard of care. A legal claim of clinical negligence is often a result of poor rapport, undesirable outcome and inappropriate response from the claimed party.

As the standard of care is always one of the grounds for justification of negligence, its definition is crucial and important. Who can define it? What is it exactly? It's a dynamic concept that changes with time and places, and it often has more than one definition depending on the medical experts' opinion. Therefore dermatologists have to keep up with the evidence for current treatments and trends in order to provide an adequate and thoughtful management for patients.

An important point about legal claims is that according to the cap 347 limitation ordinance in Hong Kong, time limit for claim for negligence is three years from the date on which case of action accrued, or the date of plaintiff knowledge.

Learning points:

Litigation for clinical negligence is costly and lengthy. It is best avoided by building a good rapport with patients, up-to-date standard of care and thorough explanation and communication with patients.

Special stains and immuno-histochemistry in skin biopsies

Speaker: Dr. King-Chung Lee
Consultant Pathologist, Department of Pathology, St. Paul's Hospital, Hong Kong

When we examine the skin under the microscope, the skin sections have to be cut into very thin slices. Those sections are colourless without staining. In order to reveal the cellular components, we need to stain the specimens. The two most common dyes being used for routine analysis are haematoxylin and eosin (H&E) staining. H&E stain acidic substance blue and other substances red. However, in some cases, other special stains are required for assessment.

For cases of suspected infections, we can use Periodic acid-Schiff (PAS) stain with or without diastase pre-digestion, Gram stain, Ziehl Neelsen stain, Wade Fite stain and Warthin Starry stain. For cases that we want to demonstrate a specific macromolecule e.g. immunoglobulin, we can use labelled antibodies that recognise the macromolecule. Then we can detect the labelled antibodies by various ways.

The textbook teaching of indications for direct immunofluorescence study includes suspected immunobullous disease, vasculitis and connective tissue disease. For cases of suspected lupus erythematosus, the presence of a lupus band is neither sensitive nor specific. For cases of suspected vasculitis, the presence of perivascular immunoglobulins is a non-specific finding. The presence of perivascular deposits of IgA in leukocytoclastic vasculitis is not specific for Henoch Schonlein purpura and it is not commonly seen in real practice. As a result, the use of direct immunofluorescence should only be reserved in cases of suspected immunobullous disease.

Learning points:

H&E staining is the most commonly used stain in histopathology. Special stains sometimes are needed to reveal micro-organisms, normal dermal components and abnormal deposits. It is recommended to use direct immunofluorescence study only in cases of suspected immunobullous disease.

Childhood-onset genodermatosis

Speaker: Prof. Ellis KL Hon
Professor of Paediatrics, Department of Paediatrics, Faculty of Medicine, The Chinese University of Hong Kong, Hong Kong

Genodermatoses are inherited genetic skin conditions which can be divided into eight groups that include genetic blistering disorders, keratinization disorders, pigmentation disorders, neurocutaneous syndromes, malignant potential disorders, ectodermal dysplasias, connective tissue disorders and vascular disorders. Knowledge of a disease gene leads to accurate diagnostic testing and identification of a pathogenic mutation helps management. Examples of childhood-onset genodermatoses include Nevoid Basal Cell Carcinoma Syndrome, xeroderma pigmentosum (XP), and epidermolysis bullosa (EB). Nevoid Basal Cell Carcinoma Syndrome is rare in Asian children and may present with multiple basal cell carcinomas. The PATCHED gene on chromosome bands 9q22.3-q31 mutations result in a defect in transmembrance protein (SMO) important for tumour expression. XP is a very rare autosomal resessive disease caused by defective DNA repair after UV light-induced injury. The basic defect in XP is in nucleotide excision repair, leading to deficient repair of DNA damaged by UV radiation. There are seven XP repair genes (XPA through XPG). Xeroderma pigmentosum is characterised by severe sunburn after a short period of sun-exposure, freckles at an early age and increased risk of many malignancies including internal malignancies. The most important part of managing the condition is reducing sun-exposure. Epidermolysis Bullosa is due to defects in the attachment between the keratinocytes in the basal layers of the skin to the dermis resulting in blistering from minor trauma. The affected children are called butterfly children as their skin is as fragile as the wings of a butterfly. A multidisciplinary approach is required to ensure optimal outcomes. Albright's hereditary osteodystrophy is an autosomal dominant disease that is caused by the mutation of GNAS1 gene. Hairs, nails, skin, sweat glands, teeth are affected. It is also associated with cataracts, vision defects, hearing problems and respiratory infection.

Learning points:

Physicians should be aware of the more frequently encountered genodermatoses. A multidisciplinary approach is needed so that optimal care can be provided.

Photosensitive disorders and photoprotection in Japan

Speaker: Prof. Akira Kawada
Professor of Dermatology, Department of Dermatology, Kinki University School of Medicine, Osaka, Japan

Examples of photosensitive disorders include the porphyrias, xeroderma pigmentosum (XP), hydroa vacciniforme (HV) and chronic actinic dermatitis. Porphyrias can be classified as acute porphyrias and cutaneous porphyrias. Erythropoietic protoporphyria (EPP) is an autosomal dominant disease with onset in infancy and childhood. It is characterised by pain, erythema, papules, vesicles and scars in sun-exposed area. This disorder is caused by abnormalities of ferrochelatase gene located on chromosome 18q21.3. There are more than 175 mutations and these mutations are family-specific. Porphyria cutanea tarda (PCT) affects middle or old-aged males with a drinking habit usually with no genetic background. It is caused by decreased activity of the uroporphyrinogen decarboxylase. It is characterised by photosensitivity, skin hyperpigmentation and hypertrichosis. Xeroderma pigmentosum is an autosomal recessive disorder with deficient DNA repair. There are 7 complementation groups (A-G). Neurological abnormalities found in XPA, XPB, XPD, XPF, XPG. XPA is the most common type in Japan. Hydroa vacciniforme is a photosensitive disorder with childhood onset. It is characterised by vesicles, crusts and scar resembling varicella occurring in sun-exposed areas. This disorder is self-healing with age. Epstein Barr virus-related RNA is positive in T cells of HV lesions in most cases. Increase of EBV DNA is also noted in patients' peripheral blood. In severe cases, EBV-related NK/T cell

haemophagocytic syndrome (HPS) may occur. Chronic actinic dermatitis is another photosensitive disorder that mainly affects middle or old-aged male patients. There is severe photosensitivity and sometimes patients are sensitive to visible light. It is treated by topical steroid and photoprotection. Cyclosporin, oral steroid, PUVA and topical tacrolimus may be useful.

Sunscreens are used to prevent sunburn, suntan, photodermatosis, photo-ageing, and to maintain the effects of laser therapy and chemical peeling. Sun Protection Factor (SPF) is the ratio of minimal erythemogenic dose (MED) with sunscreen to MED without sunscreen. The Japan Cosmetic Industry Association (JCIA) determined the upper limit of SPF as 50+ in 1999. The FDA determined the upper limit of SPF as 50+ in 2007. The protection grade of UVA (PA) is as follows: PA+ (2</=PFA<4); PA++ (4</=PFA<8); PA+++ (8</=PFA<16); PA++++ (PFA>/=16). Sunscreens can be divided into chemical sunscreens and physical sunscreens. The chemical sunscreen is an absorber and organic filter while physical sunscreen is a reflector and inorganic filter. Organic filters are photo-labile and can cause (photo) sensitisation that leads to contact and photo-contact dermatitis. It may penetrate into the skin. Inorganic filters is photostable, cause less or no sensitisation and there is no penetration into the skin. However, it causes a whitening appearance with less UV absorbance. Micronized particles cause less whitening appearance and more UV absorbance. Sunscreens with only inorganic filters may be used for patients with photo-dermatosis.

Learning points:

To prevent clinical signs of UV-induced photosensitive disorders and UV-induced harmful effect, use of sunscreens is recommended. Most sunscreens contain organic and inorganic filters.

Antibiotic resistance in P. acnes - does it matter?

Speaker: Dr. Nai-Ming Luk
Director, Dermatology Research Centre, Faculty of Medicine, the Chinese University of Hong Kong, Hong Kong

Propionibacterium acnes is one of the important pathological factors causing acne. Propionibacterium acnes induces the release of inflammatory mediators that lead to comedogenesis and inflammation. Oral and topical antibiotics are commonly used for treatment of acne. However, antibiotic resistance has become a global problem. The speaker conducted a local study among acne patients and the study showed that 54.8% of Propionibacterium acnes were resistant to one or more antibiotics. The study also suggested that prolonged use of antibiotic was associated with emergence of Propionibacterium acnes strains resistant to cycline antibiotics.

Prolonged antibiotic usage in treatment of acne may cause potential threat to patients by promoting the emergence of methicillin-resistant Staphylococcus aureus, as well as resistant strains of coagulase-negative Staphylococcus and group A Streptococcus. Therefore, it is important for clinician to be aware of antibiotic resistance when treating patients with acne. The Global Alliance to Improve Outcomes in Acne has suggested strategies to limit bacterial resistance.

Learning points:

Antibiotic resistance in Propionibacterium acnes has become a worldwide problem. Preventive strategies should be adopted to minimise the emergence of resistant strains.

Public nursing in Social Hygiene Service

Speaker: Ms. Yuet-Ming So
Nursing Officer, Social Hygiene Service, Centre for Health Protection, Department of Health, Hong Kong

Social Hygiene Service, under the Department of Health, has a long history in public health service. It aims at prevention, management and control of sexually transmitted infections (STI) and dermatological diseases.

Nursing staff in the Social Hygiene Service are responsible for sampling of specimens, microscopic examinations and performing treatment procedures. Moreover, nurses play an important role in health promotion by doing client interview, contact and defaulter tracing, record keeping, health visit, health talk and outreach service to schools, prisons, juvenile homes and other organisations.

In summary, nurses in the Social Hygiene Service act as care providers, health promoters and educators, counselors, case finders, case managers and coordinators for management of STI and dermatological diseases.

Learning points:

Public health nursing in the Social Hygiene Service provides a wide range of promotion, preventive and curative services to the public. It aims to enrich one's self-awareness of sexual health, and to reconstruct healthy life of patients and their partners.

Role of therapeutic skin care for atopic dermatitis

Speaker: Dr. Chi-Keung Yeung
Honorary Clinical Associate Professor, Department of Medicine, The University of Hong Kong, Hong Kong

Atopic dermatitis (AD) is a chronic relapsing cutaneous disease with significant pruritus affecting flexural aspects. The pathogenesis is multifactorial: genetic predisposition, immunological, environmental, impaired skin barrier and mutations of filaggrin protein. Recent advances in the understanding of the importance of skin barrier function, especially the discovery of filaggrin, has led to focus of skin barrier repair by topical agents. New moisturisers are being developed aiming at restoring the epidermal barrier function and reducing trans-epidermal water loss.

Various studies have been performed on different moisturisers which showed a steroid-sparing effect in some products thus helping to delay the next attack of eczema and decreased pruritus of patients. However, some patients withdrew from the studies due to irritation or worsening of atopic dermatitis.

A single-centre, open-label, single-arm study of a moisturising agent containing ceramide and filaggrin breakdown products was performed. The primary objective was to evaluate the performance of regular application of this moisturiser in the reduction of AD manifestations in association with conventional topical treatments. The secondary objectives included testing the local tolerability and evaluating its effects on skin parameters. Forty patients of three to sixteen years old with mild to moderate eczema were recruited for applying the product two times a day for four weeks. Thirty-one (77.5%) subjects completed the study. Nine (22.5%) dropped out because of worsening of symptoms. For those who completed the study, there was a decrease in itchiness clinically but not much improvement in decreasing the burning or scaling of AD.

Learning points:

Patients with AD have impaired skin barrier function and increased trans-epidermal water loss. Repairing the skin barrier function by appropriate use of emollients and developing new moisturisers are key elements in improving the clinical outcome of AD in the future.

Basic skin histology and differential diagnosis of 'normal skin' and how to maximise information from skin biopsy

Speaker: Dr. Paul CL Choi
Consultant Pathologist, Department of Anatomical and Cellular Pathology, Prince of Wales Hospital, Hong Kong

The histology of the skin consists of the epidermis, dermis and subcutaneous fat. The epidermis is above the dermis and has four layers, namely the stratum corneum, stratum granulosum, stratum spinosum and stratum basalis. In the epidermis, there are keratinocytes, melanocytes, Langerhan cells and Merkel cells. Skin appendages include the hair follicle, sebaceous unit and sweat unit. Ultra-structurally, the basement membrane is made up of basal keratinocyte, lamina lucida, lamina densa and sublamina densa. In the dermis, there are vascular plexus, collagen, elastic tissue, nerves, muscles and inflammatory cells such as dermal dendrocytes, lymphocytes and fibroblasts.

In order to maximise the information that can be derived from the skin biopsy, doctors need to think of what information would the histology aid in making the diagnosis of a particular skin disease. Then one needs to consider the site of the skin biopsy, the biopsy method and the way to handle the specimen afterwards. For suspected melanoma, it is best to do an elliptical excisional biopsy. When basal cell carcinoma and squamous cell carcinoma are suspected, deep shave or punch biopsy is suggested. For suspected inflammatory dermatosis, the biopsy should be taken from the site with the most advanced inflammatory changes. However, earlier lesions are preferred for blistering and vasculitic diseases since the early lesions offer the more specific histopathological findings. For blistering diseases, it is recommended to excise the whole blister if the lesions are not too large and send fresh immediately for direct immunofluorescence staining. If sending the fresh specimen immediately is not possible, we can wrap the sample in normal saline gauze or fix it in the Michel's fixative.

Sometimes the histopathological findings are subtle and one needs to examine closely to look for hidden clues to make the correct diagnosis. The list of conditions with apparently normal-looking skin under the microscope includes superficial fungal infection, porokeratosis, ichthyosis, pemphigus foliaceus, vitiligo and macular amyloidosis etc.

Learning points:

The recognition of the normal histology of skin provides the fundamental knowledge for learning dermatological histopathology. Deramtologists need to think carefully about the possible differential diagnoses before they can perform the appropriate types of skin biopsies in order to maximise the information from the samples. In addition, the histological features of some skin diseases can be tricky and can mimic normal skin histology.

Practical session, challenging cases and expert sharing

Speaker: Dr. Suat-Hoon Tan
Clinical Associate Professor, National Skin Centre, Singapore

Certain skin tumours may present with non-specific clinical features and their histopathology may be ambiguous. Examples of such cases include skin adnexal tumours like trichoepithelioma, microcystic adnexal carcinoma and eruptive syringoma. Clinico-histopathological correlation and lengthy follow-up may be necessary in providing an ultimate diagnosis. Other challenging cases include cutaneous and systemic plasmacytosis in which extracutaneous involvement such as lung, lymph nodes should be identified in this polyclonal plasma cell infiltrative condition.

Learning points:

Clinical and histopathological correlation is important in making a definitive diagnosis especially in atypical cases or rare conditions.

Haematological problems in skin diseases

Speaker: Dr. Raymond Wong
Consultant Physician, Department of Medicine & Therapeutics, Prince of Wales Hospital, Hong Kong

Haematological conditions may relate to skin diseases in different ways such as skin diseases with a possible haematological aetiology like livedo vasculopathy. This condition may be associated with autoimmune diseases, protein C/S or anti-thrombin III deficiency. Recently described conditions like hyperhomocysteinemia may also be associated, which requires specific test for workup. The skin may be related to haemato-oncological conditions as part of a paraneoplastic syndrome. Identifying these skin conditions may prompt haematological workup for underlying occult malignancies such as non-Hodgkin lymphoma in paraneoplastic pemphigus. Treatment for skin diseases may in turn give rise to haematological complications, examples include etanercept (anti-TNF-α) for treatment of psoriasis which may be complicated by the development of myelodysplastic syndrome or acute myeloid leukaemia. Efalizumab (CD11a monoclonal antibody) for psoriasis may lead to autoimmune pancytopenia.

Learning points:

Understanding the pathophysiology and the association of skin and haematological conditions allows earlier diagnosis and perhaps treatment to patients.

What you should know about cervical HPV infection in the post-vaccine era?

Speaker: Prof. Paul KS Chan
Professor of Microbiology, Department of Microbiology, Faculty of Medicine, the Chinese University of Hong Kong, Hong Kong

Human papillomavirus (HPV) is classified into high and low risk types for cervical cancer. HPV types 6 and 11 are the low-risk group that is responsible for genital warts; HPV types 16 and 18 belong to the high-risk group which is responsible for development of cervical cancer, the third leading cancer for women. Human papilloma virus infection in Hong Kong has two peaks at 26-30 years and 51-55 years of age. Both age peaks are followed by a rise of cervical cancer incidence. As the best time for receiving HPV vaccine is before sexual exposure, it is therefore ideal to be given during adolescence. Adult women who already have sexual exposure may also be benefit from HPV vaccine by reducing cervical cancer risk at second peak of age.

Currently market available vaccines against HPV serve the purpose of preventing cervical HPV infection and hence reducing the risk of developing cervical cancer. Quadrivalent HPV vaccine provides direct protection against HPV types 6, 11, 16 and 18, whereas bivalent HPV vaccine gives direct protection against HPV types 16 and 18. Apart from direct protection against these types, it is found that HPV vaccine also gives cross-protection to non-16/18 HPV types. Effect of cross-protection against HPV is not as strong as direct protection. Among the two vaccines, the bivalent vaccine has higher degree of cross protection against non-16/18 HPV types than the quadrivalent vaccine. The cross protection is attributed by presence of vaccine adjuvant which induces broader immune response with production of antibodies that cross recognise other HPV types.

Learning points:

Two HPV vaccines, bivalent (against HPV types 16 and 18) and quadrivalent (against HPV types 6, 11, 16 and 18) vaccines are available for protection against HPV infection and hence reduce the risk of developing cervical cancer.

Update on antibiotic resistance in Neisseria gonorrhoeae

Speaker: Prof. Mamie Hui
Professor of Microbiology, Department of Microbiology, Faculty of Medicine, the Chinese University of Hong Kong, Hong Kong

Gonorrhoea infection is caused by Neisseria gonorrhoeae. It is one of the common sexually transmitted infections and has become a public health concern globally. In 2011, the World Health Organisation estimated that 88 million patients were infected with gonorrhoea annually in the world. Clinical manifestations of gonorrhoea infection include urethritis, endocervicitis, rectal infection and pharyngitis. Untreated patients may progress to disseminated infection or ascending infection such as pelvic inflammatory disease.

Antibiotic resistance is a significant global issue. Neisseria gonorrhoeae was once susceptible to penicillin. Surveillance of antibiotic resistance reveals that Neisseria gonorrhoeae has become a multidrug resistant bacterium. Penicillin, tetracycline, quinolone, macrolide and ceftibuten have been abandoned as treatment of gonorrhoea due to the emergence of resistance. The reduction in susceptibility of Neisseria gonorrhoeae to ceftibuten is due to presence of a mosaic penA gene in the strain. Intramuscular ceftriaxone 250 mg in a single dose has become the first-line antibiotic of choice for uncomplicated Neisseria gonorrhoeae infection in the Social Hygiene Service in Hong Kong. Aminoglycosides such as gentamicin are being evaluated for its efficacy in treatment of gonorrhoea.

Learning points:

Monitoring of antibiotic effectiveness is very important. The standard first-line treatment of gonorrhoea has switched from oral ceftibuten to intramuscular ceftriaxone in Hong Kong. Aminoglycosides are being investigated as potential treatment options.

Recognising cutaneous lymphomas: The good and the bad

Speaker: Dr. Suat-Hoon Tan
Clinical Associate Professor, National Skin Centre, Singapore

Cutaneous lymphomas are lymphomatous infiltrates presenting in the skin and most are due to primary cutaneous lymphomas. In the skin, cutaneous T-cell lymphomas (CTCL) are more common than B-cell lymphomas. In general, CTCL has a wide spectrum of presentation, clinical behaviour and aggressiveness. There are indolent and aggressive varieties.

The indolent varieties of CTCL ("the good") include mycosis fungoides (MF), lymphomatoid papulosis (LYP) and primary cutaneous anaplastic large cell lymphoma (PCALCL).

Mycosis fungoides is the most common form of cutaneous lymphoma with an estimated incidence of 0.3 - 1.0 per 100,000 population in the US and Europe. It runs a protracted course, presenting as patches or plaques in the early stages. The tumour stage may develop in about 10% of patients and the clinical behaviour is similar to lymphoma. There are more aggressive types of MF, e.g. folliculotropic MF, MF with large cell transformation and erythrodermic MF/Sézary syndrome.

Lymphomatoid papulosis and PCALCL also have a good prognosis. Lymphomatoid papulosis typically runs a chronic relapsing course with self-healing papulonecrotic lesions. Primary

cutaneous anaplastic large cell lymphoma is a non-aggressive cutaneous lymphoma and can be treated with local therapies, e.g. radiotherapy or excision.

For the aggressive CTCL ("the bad"), the onset is acute and rapidly progressive. Within this group, extra-nodal NK/T-cell lymphoma, nasal type, which is highly associated with EBV infection, is more prevalent in Asians, Mexicans, Central and South Americans. The prognosis is poor and the median survival is usually in terms of months.

As for cutaneous B-cell lymphomas, they are much less common and account for about 20-25% of cutaneous lymphomas. The three commonest types are cutaneous marginal zone lymphoma, cutaneous follicle centre lymphoma and cutaneous large-B cell lymphoma, leg type.

Learning points:

Cutaneous lymphomas encompass a wide spectrum of indolent and aggressive subtypes. In making a definitive diagnosis, clinical presentation, histology and immunohistochemistry have to be taken into consideration. An accurate diagnosis is essential as treatment is dependent on the subtype and its expected clinical behaviour.