Hong Kong J. Dermatol. Venereol. (2008) **16**, 34-47

Reports on Scientific Meetings

SHMT Dermatology Summit 2007

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Date: 25 August 2007
Venue: Cheung Kung Hai Conference Centre, Li Ka Shing Faculty of Medicine Building, University of Hong Kong
Organisers: The Hong Kong Society of Dermatology and Venereology; The Hong Kong Association of Specialists in Dermatology (with support by HKU)

Stem cells contribute to the development, regeneration and carcinogenesis of skin

Speaker: Dr. Chung-hsing Chang
Department of Dermatology, Tzu Chi University School of Medicine, Buddist Tzu Chi General Hospital, Taiwan

The development, regeneration and carcinogeneis of the skin are related to stem cells and their communication with the microenvironment. Skin is a functional organ which develops from the ectoderm and mesoderm. Different signalling pathways, such as Wnt, BMP and Shh, specify the fate of the stem cells. The fate-specified precursor cells subsequently undergo macropatterning (skin field determination) and micropatterning (skin appendage morphogenesis) to develop into the skin structure. As for the regeneration of the skin, an individual stem cell from the 'epidermal proliferation unit' is capable of differentiating into different structures, for example the basal layer of epidermis, sebaceous gland, matrix hair and melanocyte. Finally, mutations of stem cells are involved in the process of carcinogenesis of the skin.

Learning points:
Advances in stem cell biology research will enable us to further understand the development, regeneration and carcinogenesis of skin at a molecular level.

Microbiology of atopic dermatitis

Speaker: Dr. Chi-keung Yeung
Associate Consultant and Honorary Clinical Assistant Professor, Division of Dermatology, Department of Medicine, The University of Hong Kong, Queen Mary Hospital, Hong Kong

In children with atopic dermatitis (AD), over 90% are chronic carriers of *Staphylococcus aureus* (SA). Colonisation densities are between $105/cm^2$ in unaffected skin and up to $108/cm^2$ in acute lesions. The AD disease activity is related to the degree of colonisation of SA. In the management of childhood AD, reduction of colonisation by increasing the barrier function and antimicrobial defense of the epidermis are important. Reduction of AD disease activity by topical steroids or topical tacrolimus can decrease SA colonisation. The use of antimicrobial treatment however, depends on the correlation between microbiological culture results and clinical features. Treatment is not required for isolation of SA from a bacteriological

swab unless the lesion appears infected clinically. Once the antibiotics are stopped, re-colonisation can develop relatively rapidly. Prolonged courses of oral or topical antibiotics may cause the emergence of resistant strains. The development of antibiotic resistance is an increasing problem in staphylococcal infection and has major therapeutic implications. Resistance to fusidic acid has increased. The incidence of methicillin-resistant *Staphylococcus aureus* (MRSA) is also increasing in hospital and the community.

The speaker evaluated the antibiotic resistance pattern in 198 patients with AD and 131 control patients at the paediatric clinic. SA was isolated in 71.2% AD patients and only 42% control children ($p<0.001$). MRSA was only isolated in 2 patients with AD while community-acquired MRSA having unique microbiological features was not detected. In AD patients, 23.4% of SA was resistant to erythromycin, and 19.7% of SA was resistant to tetracycline. Seven percent of the SA strains were resistant to clindamycin and 2.8% to fusidic acid. There was no statistical significant difference in resistance and risk factors between the AD and control groups.

Learning points:

Over 90% children with atopic dermatitis are chronic carriers of *Staphylococcus aureus*. Atopic dermatitis does not appear to be a risk factor for carriage of SA with higher antibiotic resistance. It is important to monitor and be aware of the local antibiotic sensitivity pattern. Sensible use of antibiotics is of paramount importance.

Quacks in dermatology – introduction to evidence based practice in dermatology

Speaker: Dr. King-man Ho
Senior Medical Officer, Fanling Integrated Treatment Centre, Social Hygiene Service, Department of Health, Hong Kong

The field of Dermatology has been associated with quackery for centuries. Increasingly these days, patients obtain information from the internet or the media and then put forth to the doctors for those they thought would be useful for their conditions. The cumulative effect is that doctors are facing an ever increasing public expectation. This is a 'lose-lose' situation for both parties and is endangering the establishment of a proper doctor-patient relationship.

Given these background, some medical pioneers have developed a field called evidence based medicine, which is defined as "the conscientious, explicit and judicious use of current best evidence about the care of individual patients" by Sackett DL et al. Clinical audit is a form of evidence based medicine and was first introduced more than two decades ago in order to improve the standard and quality of care in medicine. People are witnessing the effect of the clinical audit in various fields of clinical medicine simply because its efficacy in improving the standard of care. Dermatology is no exception. There is a hierarchy of importance of the evidences rendered from different types of studies in evidence based medicine. For instance, randomised control trial provides the good quality evidences against those originating from case series or case reports. In a particular field of medicine, several randomised control trials could give rise to a meta-analysis, which is generally regarded as the evidence of the highest scientific merit.

Learning points:

Evidence based medicine is the basis of modern medical practice, not only in dermatology but also in other branches of medical sciences.