

Reports on Scientific Meetings

2nd CUHK Dermatology Symposium

Reported by KL Hau 侯嘉林 and TS Cheng 鄭天錫

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Diagnostic approach and management of chronic urticaria

Speaker: Dr. Ting-Fan Leung
Associate Professor in Paediatrics, The Chinese University of Hong Kong

Urticaria is characterised by the rapid appearance of wheals with or without angio-oedema. A wheal consists of three typical features: a central swelling of variable sizes surrounded by a reflex erythema; associated itching or sometimes burning; and fleeting nature, with duration of usually one to 24 hours. Angio-oedema is a lesion with sudden, pronounced swelling of the lower dermis and subcutis, sometimes painful rather than itching and with frequent involvement of mucous membranes. The resolution is slower than wheals and can take up to 72 hours.

Chronic urticaria is arbitrarily defined as urticaria that has persisted for six weeks or more. Chronic urticaria can be continuous or recurrent. Some of the aetiologies of chronic urticaria include: (1) drugs such as aspirin, antibiotics (2) food (3) physical: dermatographic urticaria, delayed pressure urticaria, cold contact urticaria, heat contact urticaria, solar urticaria, vibratory urticaria,

cholinergic urticaria (4) idiopathic. Chronic urticaria can be classified into chronic idiopathic urticaria, symptomatic dermatographism or physical urticaria.

In a study, it was found that the serum samples of 37% of patients suffering from chronic urticaria exhibited IgG autoreactivity against FcεRIα. In a study of 93 children with chronic urticaria, 53% suffered from chronic idiopathic urticaria. The degree of histamine release was found to correlate well with the diameter of the wheals. For those patients having anti-IgE receptor antibody, a greater percentage of them had anti-thyroid antibodies when compared with those without the antibody. It was also found that increased plasma level of matrix metalloproteinase-9 was associated with the severity of chronic urticaria. In a series of 79 children (2-18 years; 38 males) with chronic idiopathic urticaria, celiac disease was diagnosed in four (5%) patients and 17 (0.7%) controls ($P=0.0003$). Gluten-free diet led to complete resolution of urticaria within five to 10 weeks.

In a study of 60 children with chronic urticaria followed up in the Prince of Wales Hospital of Hong Kong, 11% had peripheral eosinophilia, 49% had increased serum total IgE, 22% had low serum C4, 21% had positive ANA but none of them had anti-dsDNA or thyroid autoantibodies. They did not have deficiencies in C1 esterase inhibitor.

In the diagnostic workup for chronic urticaria, one has to look for autoimmune or systemic diseases. The following tests should be considered: (1) complete blood picture with differential cell

count and erythrocyte sedimentation rate (2) skin prick test or specific IgE assay to food or drugs (3) autologous serum skin test (4) serology for *Helicobacter pylori* (5) anti-nuclear antibody (6) complement levels (C3/C4) (7) thyroid hormones and autoantibodies, and (8) stool for ova and parasites. In addition, provocation tests with suspected physical stimuli, such as cold, heat, exercise, blunt pressure, dermatographism, may be needed.

It is important to differentiate between chronic urticaria and urticarial vasculitis. In urticarial vasculitis, the wheals may last for more than 24 hours. There may be associated purpura, pain and hyperpigmentation. Systemic symptoms and signs such as arthralgia and fever may be present in urticarial vasculitis. Increased erythrocyte sedimentation rate and acute phase reactants, reduced serum C3 and serum immune complexes may be found in urticarial vasculitis. Histology may reveal extravasation of red cells and leukocytoclasia in urticarial vasculitis.

Chronic urticaria lasts for at least a few months. Spontaneous resolution occurs within five years in 30-55% of cases. Education and counselling are the important components in patient management. The underlying causative or exacerbating factors should be avoided, including allergens and additives in food, drugs (non-steroidal anti-inflammatory drugs, angiotensin converting enzyme inhibitors) and physical factors such as cold, heat, solar, exercise or pressure. Tepid showering may temporarily relieve pruritus.

Non-sedating H₁ anti-histamines such as cetirizine, loratadine and fexofenadine remain the mainstay of treatment of chronic urticaria. Sedating H₁ anti-histamines may be added especially for those with sleep disturbance. Doxepin, a tricyclic antidepressant with significant anti-H₁ activity, may be useful for severe cases with anxiety and depression. H₂ blockers or leukotriene modifiers may be useful as second-line, add-on therapy. Newer generation of non-sedating H₁ anti-histamines such as desloratadine and levocetirizine plays a role in the treatment of this condition.

Topical steroid, topical antihistamines and local anaesthetics are not useful. A short course of systemic corticosteroid, cyclosporin A, intravenous immunoglobulin or plasmapheresis may provide clinical benefit as the last resort for chronic idiopathic urticaria. Anecdotal reports exist for the use of methotrexate, sulphasalazine, cyclophosphamide or stanazol in this condition.

In a recent study, 20 female patients with chronic idiopathic urticaria and autoimmune thyroiditis were given increasing dose of thyroxine until total suppression of thyroxine stimulating hormone was achieved. Eighty percent of these patients responded dramatically with a decrease in erythrocyte sedimentation rate and serum total IgE.

Learning points:

About 50% of chronic urticaria is idiopathic, and many of these cases turn out to be autoimmune in nature. Patients should be assessed for autoimmunity, food and drug IgEs, and *Helicobacter* and parasitic infections. Non-sedating H₁ anti-histamines plus H₂ anti-histamines or leukotriene modifiers are preferred for the treatment of chronic idiopathic urticaria.

Management of common leg ulcers

Speaker: Ms. Man-Ying Lee

Nurse Specialist (Geriatrics and Wound Management),
North District Hospital

Leg ulcer is one type of chronic wound problems. The aetiologies can be arterial, venous, mixed, diabetic and neuropathic or due to various skin conditions. Different ulcers may need different treatment approaches. Advanced wound care practice includes providing moist wound environment, choosing special dressings, applying topical medication and giving adjuvant therapy.

Apart from focusing on the ulcer wound, the assessment of the patient as a whole is very important. The co-morbid state, smoking, nutritional state and mobility can give hint for the prognosis of wound healing. Psychosocial factors

are also important, such as financial support, living environment, personal hygiene and standard of care from the nursery home. The leg condition can affect the wound healing, such as joint mobility, oedema, pedal pulse and Ankle Brachial Pressure Index (ABPI).

Venous ulcers locate on the gaiter area near the medial malleolus. The ulcer is shallow with irregular borders. It is wet with moderate heavy exudates. There can be eczematous changes. On the wound base, there may be little slough but fibrin deposition. Venous ulcers are associated with varicose vein, atrophic blanche and lipodermatosclerosis.

Arterial ulcers are associated with dystrophic nails and cool skin. The affected legs are atrophic, thin and hairless. There can be dependent rubor, taut, dry necrosis with minimal exudate. The leg may develop dry gangrene, which will have pale base and the patient will complain of rest pain.

The leg ulcer with mixed aetiology can be due to arterial and venous or venous and diabetes. There is oedema and pigmentation, mixed symptoms and signs and ABPI is around 0.5-0.8. The elevation will be painful.

Management of leg ulcer should consist of multi-disciplines. For complicated wound, referral to vascular clinic, diabetic foot clinic and podiatrist are necessary. Examples are diabetic foot, peripheral vascular disease (PVD), vasculitis, rheumatoid arthritis, atypical presentation, contact dermatitis to drugs including steroid, ulcers that fail to improve after one month, suspected malignancy or when surgery is needed.

The aim of care of venous ulcers is to control the exudates, remove slough, remove fibrin cuff, reduce dermatitis and promote angiogenesis. For arterial ulcers, there should be no occlusive dressings. Non-adherent dressing materials should be used. Dry eschars should be inspected for any sepsis or dermatitis. No aggressive bedside debridement should be performed.

Compression is the first management approach and it helps to control the oedema. Light compression will be given by applying single layer elastic bandage. Watch out for numbness and pain is necessary. Prior to this application, it is crucial to document the ABPI: >0.8 and <1.3 , ABPI is normal, high compression can be applied; $=$ or <0.8 , ischaemic, referral for investigation, light compression can be applied; <0.5 , PVD, no compression. For the compression pressure, it is recommended to be 30-40 mmHg for an ankle circumference greater than 18 cm. In Hong Kong, due to hot and humid weather, most patients can only tolerate 25-35 mmHg. Multilayer compression is recommended. The choices of bandage can be support crept bandage (unknown pressure), straight tubular elastic type (6 mmHg), graduated tubular elastic type (24 mmHg), Elset (17 mmHg) and Setopress (20/30/40 mmHg).

The medications that can help in leg ulcers include diuretics, oxpentifylline, pentoxifylline and cilostazol (for arterial ulcers). Pain control is very important. Adjuvant measures consist of ultrasound, low energy phototherapy (Biopton), infrared (Anodyne), laser and vibration treatment. However, the efficacies are not conclusive.

The patient should be educated to elevate the legs for venous ulcer and compliant to the compression. Exercise should be encouraged. The clients should be aware that wearing of the elastic stockings can be up to five years. For the arterial ulcers, clients should avoid trauma, quit smoking, avoid high fat food, avoid strenuous exercise and give regular skin care.

Learning points:

Leg ulcer is one type of chronic wound problems. The aetiologies can be variable and different treatment approaches should be adopted for different type of ulcers. The basic principle is to provide moist wound environment, use of special dressings, adding topical medication and adjuvant therapy.