

Reviewed by Dr. K. Y. Chow, Dr. H. F. Ho, and Dr. W. S. Lam

A retrospective study on efficacy and complications of Q-switched alexandrite laser in the treatment of acquired bilateral nevus of Ota-like macules

Lam AYM, Wong DSY, Lam LK, Ho WS, Chan HHL.

Dermatol Surg 2001;27:937-42.

Acquired bilateral nevus of Ota-like macules (ABNOM) affect about 0.8% of Asians and appear as symmetric bluish pigmentation over both malar regions. Histology shows melanocytosis in upper dermis.

The effectiveness and complication rate of QS alexandrite lasers in treating ABNOM were investigated in a retrospective study involving thirty-two Chinese women aged 28 to 66 years. Most had onset in their late 20s. They all received QS alexandrite laser treatment (spot size 3 mm, 755 nm, at a fluence of 8 J/cm²). 'Immediate whitening without purpura' was used as the endpoint. The response and complications were assessed by two independent observers using clinical photographs (before first treatment and after last treatment).

The subjects received an average of seven treatment sessions, with a mean treatment interval of 33 days. More than 80% of patients had more than 50% of clearing and more than 28% of patients had complete clearing. Hypopigmentation was found in 50% of the subjects while hyperpigmentation was present in 12.5%. Transient erythema was seen in 40.6%. No scarring was observed.

The authors concluded that QS alexandrite laser seemed to be effective in treating ABNOM. Further study was necessary to compare the usefulness of different laser systems in ABNOM.

Montelukast in the treatment of children with moderate-to-severe atopic dermatitis: a pilot study

Pei AYS, Chan HHL, Leung TF.

Pediatr Allergy Immunol 2001;12:154-8.

The use of montelukast, a cysteinyl-leukotriene-1 receptor antagonist, was investigated in fifteen patients with moderate to severe atopic eczema. The subjects were randomized to receive either montelukast 5 mg daily first (group B) or a placebo first (group A) in a double-blind placebo-controlled crossover study design. There was a two-week run-in period in which standardized topical treatment was commenced. They received either the drug first (group B) or placebo first

(group A) for four weeks, underwent a two-week washout period, and then crossed over for another four weeks. They were assessed by a single observer for disease severity and extent as well as subjective impact on daily living.

Six subjects in group A and five in group B completed the study. There was a statistically significant difference between the net change in the median severity scores during the treatment and placebo phase, in favour of the treatment, in group B only (p=0.043). Therefore group B (drug before placebo) patients showed significant improvement with montelukast. This was attributed to a greater disease severity in group B and limited treatment duration.

Thus montelukast might have a role in treating severe atopic eczema and a larger trial was necessary to evaluate its effectiveness.

The clinical features, malignant potential, and systemic associations of oral lichen planus: a study of 723 patients

Eisen D.

J Am Acad Dermatol 2002;46:207-14.

The author described the clinical characteristics of 723 patients with histologically confirmed oral lichen planus (OLP) under his care from six months to eight years (average 4.5 years). The mean age of onset was 57 years for female and 47 years for male. The male-to-female ratio was about 1:3. The erosive form of OLP was the main type in about 40% of the patients. The erythematous form and reticular form was the predominant type in 37% and 23% respectively. The commonest site of involvement was the buccal mucosa (90% of patients).

The erosive lesions were always symptomatic whereas isolated reticular lesions were often asymptomatic. Aggravating factors like stress, tomatoes, spicy food, dental operations, alcohol and tobacco consumption were reported by patients. No association was found between OLP and systemic illnesses like hepatitis C, hypertension, diabetes and arthritis. Squamous cell carcinoma (SCC) was noted to develop at sites previously involved by OLP in six patients (0.8%). Four of them had the erosive form and two had the erythematous form. The time from diagnosis of OLP to malignant transformation varied from six months to seven years.

The author suggested that periodic follow-up of OLP patients to identify malignant change was essential.

The effect of race and ethnicity on patch test results

DeLeo VA, Taylor SC, Belsito DV, et al.
J Am Acad Dermatol 2002;46:S107-12.

The authors investigated the differences in patch test reactions between white and black subjects suspected to have allergic contact dermatitis in a multi-centre study in USA from July 1992 to June 1998. Forty-one allergens were tested in two-year cycles over the six years of the study. The race of a patient was decided upon self-report and/or skin colour.

A total of 9624 patients were patch-tested. 10.5% of them were black and 89.5% white. The commonest site of involvement was hands (32%), followed by face (16%), for both groups. The overall sensitization rate was similar between the races. Forty-nine percent of white subjects and 46% of black subjects were diagnosed to have allergic contact dermatitis.

However there were some differences in the specific allergens to which the two groups were sensitized. The white subjects had higher rates of sensitization to lanolin, epoxy resin, thioureas, balsam of Peru, glutaraldehyde, formaldehyde and some formaldehyde-containing preservatives in at least one two-year cycle. The black subjects had higher rates to *p*-tert-butylphenol formaldehyde resin, cobalt chloride, thioureas and *p*-phenylenediamine in at least one two-year cycle. These differences were more likely to be accountable by their different allergen exposure patterns than by their genetic differences.

Long-term results in patients with onychomycosis treated with terbinafine or itraconazole

Heikkil H, Stubb S.
Br J Dermatol 2002;146:250-3.

The LION study concluded that at 72 weeks, patients with toenail dermatophyte infection who received 12(T₁₂) or 16(T₁₆) weeks of terbinafine responded significantly better than patients who received either 3(I₃) or 4(I₄) pulses of itraconazole therapy. This study re-examined the Finnish patients who had completed the original LION study at the end of the 4-year follow-up period.

Of the 91 Finnish patients originally completed the LION study, five could not be located. Another ten patients were excluded because they received additional systemic antifungal treatment for toenail onychomycosis. Seventy-six patients therefore participated in this four-year follow-up study. They were

evaluated for mycological, clinical and complete cure of their toenail onychomycosis.

The complete cure rates of these four groups of patients were 14 out of 18 (78%) for T₁₆, 8 out of 23 (35%) for T₁₂, 4 out of 17 (24%) for I₄ and 5 out of 18 (28%) for I₃. The cure rate for the T₁₆ group showed the greatest improvement during the follow-up period.

The authors suggested that a four-month course of terbinafine was more efficacious in treating toenail onychomycosis. However this suggestion is based largely on trends rather than formal statistical analysis which would require a larger study.

Terbinafine (Lamisil®) treatment of toenail onychomycosis in patients with insulin-dependent and non-insulin-dependent diabetes mellitus: a multicentre trial

Farkas B, Paul C, Dobozy A, Hunyadi J, Horvath A, Fekete G.
Br J Dermatol 2002;146:254-60.

Previous studies had demonstrated that diabetic patients stood a 2.8 times higher risk of having toenail onychomycosis than non-diabetic subjects. And approximately one-third of diabetic patients had toenail onychomycosis.

This prospective, open study undertaken in five centres in Hungary was designed to assess the safety, tolerability and effectiveness of terbinafine in the treatment of toenail onychomycosis in diabetic patients on anti-diabetic drugs or insulin. Caucasian patients aged 18 to 70 years with toenail dermatophyte onychomycosis involving at least one big toe nail proven by mycological culture were enrolled. They were treated with 12 weeks of terbinafine 250 mg daily. Patients were evaluated for mycological, clinical and complete cure at week 48.

One hundred and four patients were recruited and 89 completed this study. The mycological, clinical and complete cure rates were 73.0%, 57.3% and 48.3% respectively. The rates obtained were similar to those observed in previous studies involving non-diabetic subjects. No hypoglycaemic attack was reported. Its efficacy and tolerability did not differ from those in non-diabetic patients.

The authors concluded that terbinafine was equally safe and efficacious in the treatment of diabetic patients with toenail onychomycosis. It should be noted that this study was supported by Novartis which manufactures terbinafine.

Topical 3.0% diclofenac in 2.5% hyaluronan gel in the treatment of actinic keratoses

Wolf JE, Taylor JR, Tschen E, Kang S.
Int J Dermatol 2001;40:709-13.

This double-blind, randomized, placebo-controlled study was designed to assess the efficacy of topical 3.0% diclofenac gel in 2.5% hyaluronan gel applied twice daily for 90 days in the treatment of actinic keratosis (AK).

One hundred and twenty patients aged at least 18, with five or more AK over forehead, central face, scalp, arms or hands were recruited in four centers in the USA. Ninety-six patients completed the trial. Fourteen patients in the treatment arm withdrew (8 because of adverse effects, 6 because of non-compliance). Eight withdrew from the placebo arm (4 because of adverse effects, 2 because of non-compliance, 2 because of withdrawal of consent). A significantly higher proportion of patients in the treatment arm achieved significant-to-complete improvement when compared to the placebo arm ($p < 0.001$), assessed both quantitatively and qualitatively at the end of treatment and also at 30 days afterwards. Overall the treatment was well tolerated and was associated with only mild-to-moderate local side effects, like pruritis, dry skin, and application site reaction etc. No clinically significant alternations were found in laboratory investigations (blood counts, blood biochemistry and urinalysis).

The authors concluded that 3% diclofenac in 2.5% hyaluronan gel was a non-destructive, effective, well-tolerated, user-friendly treatment for actinic keratosis.

Type IV hypersensitivity reactions to natural rubber latex: results of a multicentre study

Sommer S, Wilkinson SM, Beck MH, English JS, Gawkrödger DJ, Green C.
Br J Dermatol 2002;146:114-7.

Natural rubber latex (NRL) is a well-known cause of type I hypersensitivity reaction. Whether a true type IV hypersensitivity to NRL exists has been a subject of debate. Five centres of the British Contact Dermatitis group undertook a prospective survey on the prevalence of type IV hypersensitivity to NRL. Ammonia-preserved NRL solution was used for patch testing. It was free of additives such as thiurams, carbamates or benzoisothiazolin-3-1 which could cause positive patch test reactions.

The authors recruited 2,738 consecutive patients routinely referred for patch testing. Twenty-seven patients (1%) had a positive test result considered to be allergic in nature. Nineteen (70%) of them were of current relevance. Thirteen (48%) patients had hand eczema. Contact urticaria was also found in 14 patients, out of the 27 patch-tested positive patients.

The authors concluded that delayed-type hypersensitivity to NRL did exist and patch-testing with ammonia-preserved NRL solution could be used to identify this group of patients.

Parental knowledge and practice of primary skin cancer prevention: gaps and solutions

Weinstein JM, Yarnold PR, Hornung RL.
Pediatr Dermatol 2001;18:473-7.

A lot of programmes were undertaken in the past 20 years to educate the public about the importance and practice of sun protection. Much of the effort was centred on children and their parents. This study aimed to assess parents' knowledge, practice and source of information on photo-protection. Two hundred and sixty-nine consecutive parents in a dermatology clinic and a paediatric clinic were approached for consent. Two hundred and fifty-four (94%) were finally recruited for this questionnaire survey.

Their average age was 37 years old. Their mean knowledge score was 61%. Better knowledge scores were predicted by having fewer children and working as health professionals or other professionals. Greater parental sunscreen use was in those having higher knowledge score, younger age and fewer lifetime sunburns. Hats and protective clothing for child were used more among health care professionals or other professionals, those with younger age, and among paediatric clinic attendees. Discrepancies between knowledge and practice exist: some parents knew that suntan was not healthy but felt that their kids looked healthier with a tan. Although most of the respondents preferred primary care physicians and dermatologists as their source of solar protection information, most of their knowledge came from the mass media.

They concluded that it was important to convey the right message through the mass media and to further educate physicians about solar protection.

Laser surgical planning with magnetic resonance imaging-based 3-dimensional reconstructions for intralesional Nd:YAG laser therapy of a venous malformation of the neck

Glaessl A, Schreyer AG, Wimmershoff MB, Landthaler M, Feuerbach S, Hohenleutner U.
Arch Dermatol 2001;137: 1331-5.

With the aid of magnetic resonance imaging and three-dimensional reconstruction techniques, percutaneous and intralesional Nd:YAG laser was used to treat a venous malformation on the neck of a 27-year-old woman. Data from magnetic resonance imaging was used to construct a 3-D model on a computer workstation to illustrate the complex anatomy and subcutaneous extension of the venous malformation first. Percutaneous and minimally invasive intralesional Nd:YAG laser were then employed to treat the venous malformation.

With the reconstruction techniques, the dermatologists concerned could visualize in more details the venous malformation itself and the surrounding anatomical structures prior to laser treatment. The intralesional laser had the advantage of direct penetration of the deeper target lesion without causing thermal damage to the skin. A 16-gauge needle was inserted and the laser fiber was threaded through the needle to convey the laser light directly onto the vascular lesion. The whole procedure was done under general anesthesia. There was a risk of damaging the facial nerve and thermal injury to the lower surface of the skin. For the former, intraoperative facial nerve monitoring could be used to safeguard its viability.

The authors suggested that using both percutaneous and intralesional laser, under the guidance of the modern three-dimensional imaging techniques, could give an optimal result and minimize the side effects in treating venous malformation.

Tinea capitis in infants less than one year of age

Romano C, Gianni C, Papini M.
Pediatr Dermatol 2001;18:465-8.

While tinea capitis was not uncommon in childhood, diagnosis of this condition in infancy is often missed. In this study, 15 patients (10 boys and 5 girls) less than one year old (aged from 45 days to 12 months) with tinea capitis were reported.

Their clinical presentations included: kerions; scaly patches of alopecia, inflammation and broken hairs;

patches of hair loss and blackdots of hairs broken at the root level. Diagnosis was confirmed with microscopic examination of KOH preparation of hair and culture on Sabouraud glucose agar with cycloheximide and chloramphenicol. All diagnoses were mycologically confirmed: *Microsporum canis* in nine patients, *Trichophyton mentagrophytes* in three, *Trichophyton erinacei*, *Trichophyton tonsurans* and *Trichophyton violaceum* each in one patient. All were successfully treated with topical imidazole and systemic griseofulvin for 30 to 60 days. Two patient received terbinafine for three to four weeks. In case of anthropophilic dermatophytosis, contacts of the infant are needed to be carefully screened.

Dermatologists need to be aware of the possibility of tinea capitis in infants with scaly patches of hair loss and broken hairs, and to distinguish it from seborrheic dermatitis and bacterial folliculitis.

Is dermatoscopy (Epiluminescence microscopy) useful for the diagnosis of melanoma?

Bafounta ML, Beauchet A, Aegerter P, Saiag P.
Arch Dermatol 2001;137:1343-50.

This is a meta-analysis comparing the dermoscopic diagnosis of melanoma by experienced dermatologists with naked-eye clinical examination. Original studies fitting pre-set criteria were included. Eight articles out of 672 identified from literature search were used in this study. This comprised 328 melanomas, mostly less than 0.76 mm thick, and 1865 non-malignant pigmented skin lesions.

The estimated odd ratios of dermoscopy and naked-eye examination were respectively 76 (95% confidence interval, 25-223) and 16 (95% confidence interval, 9-31). The corresponding positive likelihood ratios were 9 (5.6-19.0) and 3.7 (95% confidence interval, 2.8-5.3) respectively, whereas the negative likelihood ratios were 0.11 (95% confidence interval, 0.05-0.18) and 0.27 (95% confidence interval, 0.19-0.36) respectively. They found that dermoscopy, if done by experienced physicians, had significantly greater discriminating power compared with naked-eye clinical examination. Dermoscopy could suggest whether biopsy was necessary. This study, like other meta-analyses, was subject to publications bias. Small studies and those with negative results were less likely to be published.