

Reports on Scientific Meetings

New therapies in acne management

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Venue: Sheraton Hong Kong Hotel
Speaker: Dr. Anthony Christopher Chu,
Head of Dermatology,
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Technology and Medicine,
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Hospital, UK
Organiser: The Hong Kong Society of
Dermatology & Venereology

Acne vulgaris is the commonest dermatosis affecting mankind. All ethnic groups are affected, with the peak age of onset at 11 to 15 in girls and 15 to 17 in boys. The incidence in adolescents is over 90%. The clinical lesions can be divided into non-inflammatory (open comedones, closed comedones) and inflammatory (papules, pustules, nodules and cysts). About 75% of patients have mild to moderate disease while 25% have moderate to severe disease.

The problems with conventional treatments are compliance, cosmetic acceptability, slow onset of action and drug resistance. In particular, the drug resistance of *Propionibacterium acnes* (*P. acnes*) to erythromycin will cross react with clindamycin and even with tetracycline as well. This may be the cause of treatment failure. In addition, drug resistance of *Staphylococcus epidermidis* appears rapidly with topical antibiotic treatment. Plasmids may also transfer

resistance to *Staphylococcus aureus* thus conferring multiple drug resistance.

The newly formulated topical gel Duac® contains 10 mg clindamycin (1%) and 50 mg benzoyl peroxide (5%) in each 1 gm. It can be used once daily to the affected areas. Clindamycin is bacteriostatic against Gram positive aerobes and a wide range of anaerobes including *P. acnes*. Benzoyl peroxide is an oxidizing agent with bactericidal activity against *P. acnes*. It is also mildly keratolytic acting on comedones at all stages and is sebostatic.

The anti-bacterial effects can be demonstrated after one week of treatment where there was a 99.8 % (>2 logs) reduction in number of *P. acnes* compared to 30-62% (<1 log) for different formulations of clindamycin. After two weeks of treatment, there was a 99.9% (>3 logs) reduction in *P. acnes* numbers compared to 88-95% for different formulations of clindamycin.

The presence of benzoyl peroxide reduces selective pressure for clindamycin resistance. It also reduces the risk of emergence of resistant *Staphylococcus aureus*. Therefore it maintains the clinical responsiveness to the product and reduces multiple drug resistance to *Staphylococcus aureus*.

Different studies showed significantly greater reduction in total, inflammatory and non-inflammatory lesion count compared to placebo or clindamycin. The percentage reduction in all

parameters was numerically greater with this new combination formulation than benzoyl peroxide alone, but did not reach statistical significance. Compared with topical adapalene, Duac gel demonstrated statistically significant greater reduction in inflammatory lesion count in a multi-centre, investigator blinded, randomized, parallel group study. The tolerability was better in Duac group (77% in Duac versus 52% in adapalene group, three application site reactions in Duac group versus 20 in adapalene group).

The speaker had prescribed this new formulation in his department for the last two

years. It is a very effective drug with rapid onset of action. It can be used as monotherapy in mild acne, and combined with topical retinoid in moderate acne. The once daily regimen greatly enhances compliance.

Learning points:

The newly formulated topical gel Duac® that contains a combination of clindamycin and benzoyl peroxide, is an effective once-daily topical treatment of acne. It has the advantage of rapid onset of action and better drug compliance.