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hEGF Offers Novel Treatment for Diabetic Foot Ulcers

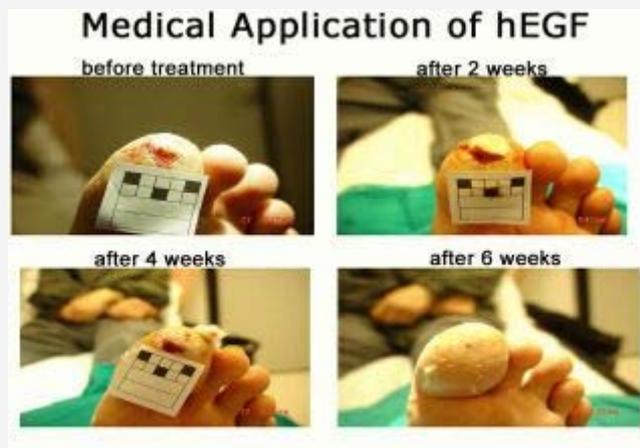
Clinical studies conducted by the United Christian Hospital (UCH) in collaboration with the Hong Kong University of Science and Technology (HKUST) have demonstrated that human epidermal growth factor (hEGF), produced using a biotechnological approach, can be an effective treatment for diabetic foot ulcers.

Dr Wan Keung Wong, Associate Professor at HKUST's Department of Biochemistry, is joining hands with Dr Man-Wo Tsang, consultant in charge of Diabetes and Endocrinology at the United Christian Hospital, to examine the application of recombinant hEGF to the treatment for diabetic foot ulcers.

hEGF has been shown to stimulate new growth of skin, intestinal and corneal surfaces, and to help treat wounds, burns, ulcers and corneal damage. However, the extensive use of hEGF as a therapeutic agent has for many years been hampered by its high production cost.

The study, conducted on 61 patients, in three groups, from 2000 to 2002, revealed that hEGF is an effective agent for the treatment of diabetic foot ulcers, achieving a high healing efficiency of 95% within a median time of six weeks, in comparison with 42.1% for non-hEGF treatment over a period of 12 weeks.

The findings will be unveiled in the 6 June 2003 issue of *Diabetes Care*, a leading clinical diabetes journal published by the American Diabetes Association.



Dr Wan Keung Wong (left) and Dr Man-Wo Tsang

The supply of hEGF was provided by Dr Wong and his research team at HKUST, who employed a recombinant DNA technology to mass produce hEGF cost-effectively.

"This is the first time that hEGF has been found to be clinically effective in treating diabetic foot ulcers. I believe that with large-scale production, the cost can be further reduced significantly," says Dr Wong. Encouraged by the positive results, he is seeking sponsorships of large-scale clinical trials and relevant regulatory approval.

"Diabetic foot ulcers are difficult to heal because of the underlying neuropathy and poor peripheral circulation. Many patients have to live with the wounds for one to two years, succumbing to sepsis and frequently requiring amputation,"

says Dr Tsang. "With hEGF as our new armament, we can be more aggressive in treating diabetic foot ulcers, helping patients to avoid unnecessary suffering of chronic pain and leg amputations. Preliminary studies also show that hEGF

can be effective in healing bedsores."

Diabetic foot ulcers, one of the complications of diabetes, are caused by nerve damage in the feet and low blood circulation. In Hong Kong, about 300,000 people are suffering from diabetes. It is estimated that 15% of diabetic patients develop foot problems requiring treatment, and 50% of all lower limb amputations in orthopedic units are due to diabetes mellitus. Currently, antibiotics and vascular reconstruction are used for the treatment of diabetic foot ulcers.