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Viewpoints

Long story, short hairs

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During my visit to the National Skin Cancer in the summer of 2007, I missed the Hair and Nail Clinic. To make up for the loss, I went into the treatment room and watched the nurse there deliver treatment to patients. I saw a "long haired" young lady come in who then sat down on the chair and handed a prescription to the nurse. From the drawer, the nurse took out a battery of solutions and dipped a cotton bud into one of them. She coolly said to her, "take it off." Suddenly I found the patient did not have a single hair and was totally bald! The nurse then carefully applied the solution to the patient's scalp. Next a youngster came in who had a head of short hair. Against my expectations, he did not take off his "wig" because his hair was real!

"He has hair has totally grown back", I was told.

"Oh…," I marveled and said to myself, "Is the drug really that magical?"

At that time, I was not familiar with the treatment. Later, I found out that the solution was a chemical called diphenylcyclopropenone (DPCP), a local irritant for treating patients with alopecia totalis.

After coming back to Hong Kong, I noted that DPCP was not available in our dispensary and did not bother to pursue it any further. It was not until I met my first trial patient.

It was a busy clinic day and after seeing thirty or more patients, I was actually a bit tired. Then a young man came in and sat with his head down looking at the floor, not saying a word. I read his referral letter mentioning hair loss for three years. I glanced at his face and it seemed that there was nothing wrong with his hair. I was wondering whether it was just a simple case of alopecia areata with the bald patches hidden beneath the terminal hairs. I asked the patient to show me the bald patch. Instead, he removed his wig to expose his hairless scalp. At that juncture, I realized the reason for his silence was that he was very depressed.

His name was Lee, a 28-year-old bartender. Four years ago, he noticed an increasing amount of hair in the sink after shampooing. He started to panic when almost half of his hair was gone. Within half a year time, he had completely lost all his scalp hair. His colleagues avoided him as they suspected that he had an infectious disease. His boss also suggested that he took a break at home. Lee was quick to grasp his meaning and shortly resigned. Blown by his resignation, he lost

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confidence in dealing with people. He shrank from meeting friends. In despair, he shopped around and saw a handful of expensive doctors that cost him almost all his savings. He even tried Chinese herbs and acupuncture in vain. For three years, his hair never showed any sign of re-growth. He eventually ended up in a government skin clinic.

I was touched by Mr. Lee's story, and then my Singapore experience suddenly flashed in my mind. I muttered to myself, "perhaps DPCP will be useful."

As usual it was easier said than done. To institute the treatment, a number of problems needed to be solved. Where could I get the DPCP? How much did it cost? Who would pay for it? How could I make up the solutions? More importantly, was it safe and effective?

Going to the Internet, finding the relevant information was not difficult. We were able to locate the supplier and the local agent easily enough. Again, the substance was not too expensive; costing less than one thousand Hong Kong dollars a gram. Within a few months, the substance was delivered to us.

It came in the form of 99.99% pure crystalline powder. I searched the literature about the treatment concentrations and the possible solvent used. I was taken aback when I learnt that the lowest concentration of application was 0.001%. I contacted the pharmacist and requested for help, but was politely turned down, alleging that they did not have the appropriate measuring instrument. I was very frustrated. What was I supposed to do with this powder? More importantly, I missed the opportunity to offer my help to these miserable patients. I blamed myself for not being thoughtful enough before acquiring the DPCP.

Two weeks later while I was strolling in the University campus, I stopped outside the Chung Chi stadium and watched people playing football. I saw a short chap yelling in the pitch. He kicked the ball with all his might but missed. He tumbled over and fell heavily on the ground. I recalled a similar scene more than 20 years ago when our undergraduate football team played against the staff. The chap had the reminiscence of Dr. Kelvin Chan, a friendly Professor from the Department of Pharmacy. At that moment, I was struck by an idea and a solution seemed to emerge.

I was not acquainted with Professor Kenneth Lee at that time though I knew he had an ardent love for charity. I saw him and his son play the violin in a fund-raising program on television. I thought to myself, "Perhaps, Professor Lee is the right person to seek help." So I sent him an e-mail stating my request and attached an article on the use of DPCP to treat alopecia totalis. Two days later, I received his reply asking me to discuss with him in more detail about the type of preparations I wanted. See! I had found the right person. I took the powder with me and went straight to the Department of Pharmacy at the Basic Medical Science Building and explained to Professor Lee about my request enthusiastically. A few weeks later, I had my armamentarium in my hands and was ready to offer my help.

Theoretically, the application of DPCP was not difficult. Initially you have to sensitize the patient by applying a 2% DPCP solution to a small test area. Two weeks later, if there were no untoward side-effects, you started to administer the lowest concentration, i.e. 0.001% to the whole scalp. You then slowly stepped up the concentration, aiming to maintain a minimal irritation. The application has to be applied weekly, which is taxing for both the patient and the physician. As this was our first patient, we did not really know what would happen. In our patient, apart from a few bullae over his scalp, there were no serious adverse effects from the sensitizing procedure. We then slowly stepped up our concentrations from 0.001% to 0.01% and then 0.05%. Week after week, we

treated the patient who came punctually. We also had enrolled a few more patients.

Nothing happened for the first three months. Our confidence started to falter. I began to query the efficacy of the DPCP. I also thought about other possibilities: Were there any other active ingredients that we had missed? Was the solvent we used not as pure as others? Were we using too low a concentration? Should we step up the concentrations more rapidly? All these unanswered questions only added to our uncertainty. Then near the end of the fourth month, something happened.

The patient told us that he felt his scalp a little bit "rough" these days. I put my hands on his scalp to ascertain his claim. Yes, it was rough. "What caused it?", I asked myself. I moved the magnifying lens over the patient's head and looked carefully. I rejoiced! I saw the short stub of terminal hairs budding out of all the hair follicles. "It worked, the DPCP had worked!" I embraced the patient and told him what I had detected.

It was like the joyful experience of watching your kids getting taller and taller everyday. As time passed, we noticed his hairs sprout millimeter by millimeter. By the end of the six months, he had regained much of his confidence and was not wearing his wig anymore (Figures 1 and 2).

We made it! I pondered to myself. I was encouraged by the success of this patient. However, not all my patients were so lucky. Within this period, we had a total of eight patients, only two of them had such a dramatic response, whereas the others had some but not total hair re-growth. Nevertheless, I am not discouraged; I know that not every treatment promises a cure. I also realize that every patient is different.

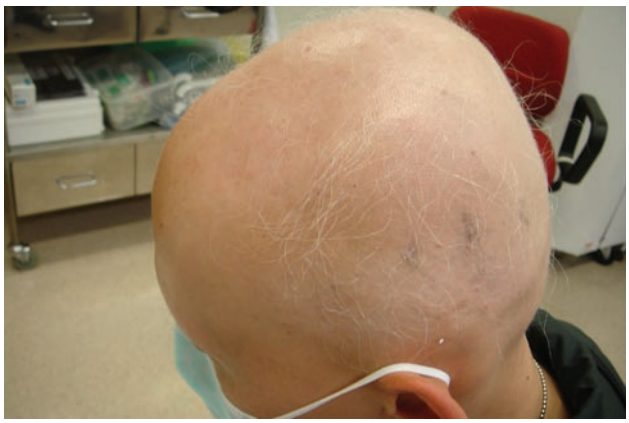

Figure 1. Before treatment with DPCP.

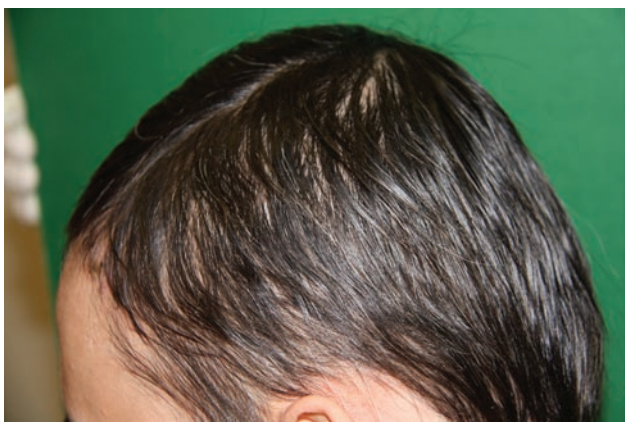

Figure 2. After treatment with DPCP.

But one thing for sure, as long as we care for our patients, we will eventually find a better treatment for them.

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