

Frankfurt General Newspaper

March 3, 2017

Is Balding Your Destiny?

By Andreas Frey

In the TV series *Crime Scene*, Professor Boerne uses a potion to regrow his hair. In real life, there's a product that does the same thing, and it works. But it's controversial.

In today's episode of *Crime Scene*, vain forensic pathologist Karl-Friedrich Boerne discovered bald spots on the back of his head and was determined to find a cure. He's not the only one with this problem.

Seventy to eighty percent of German men suffer from androgenetic alopecia, which is genetically determined hair loss. According to the Norwood-Hamilton Scale, there are seven distinct stages of male baldness. As the hair starts to recede, bald spots appear in the hairline. Soon it goes further back; sometimes it recedes to the top of the head.

The density of the hair also decreases, to the point where the scalp is clearly visible. In the end, only a Hippocratic wreath remains. Women can also experience genetically determined hair loss.

Alopecia is not a disease, but it's often a blow to one's self-esteem and can trigger depression. A full head of hair is associated with youthfulness, and that has value in our culture. The hair-growth industry is a billion-dollar business. Drug stores offer shelves full of shampoos to combat baldness, and you can buy all sorts of lotions and ointments online. But in the end it's all quackery.

In today's episode of *Crime Scene*, Boerne convinced a scientist to give him a bottle of a miraculous hair-growth product. Commissioner Thiel met a young woman with blue hair, who turned out to be his daughter. A journalist was murdered. This case is getting hairy.

From drug to lifestyle product

There are only two known effective substances for hair growth: minoxidil and finasteride. In the eighties, researchers discovered that minoxidil, a blood pressure drug, had hair-growth stabilizing properties. It helps both genders, but is not cheap. And after you stop taking it, your hair loss picks up where it left off.

Finasteride has also had a double purpose since the late 1990s, initially as a medication used to treat prostatic hyperplasia (Proscar), and later as a lifestyle product to slow or halt hair loss (Propecia). It works in nine out of ten men, as long as they still have hair to be saved. Its high level of effectiveness is achieved by attacking the root of the problem.

The hundreds of thousands of hairs a human normally has are anchored in tiny pockets: the follicles. Each follicle goes through a cycle of growth and rest that lasts a few years, that makes losing up to one hundred hairs per day completely normal. Depending on genetics and age, the hair roots are sensitive to the male hormone dihydrotestosterone. Finasteride blocks the production of this hormone, therefore altering the hormonal balance. Despite this, hundreds of thousands of men use this medicine every day, among them Donald Trump, as his doctor revealed to *The New York Times* in February.

With probable side effects

Use of finasteride could possibly have serious consequences. According to current findings, regular intake of the drug could have irreversible side effects, from erectile dysfunction and loss of sexual drive to depression. The latest study from the Feinberg School of Medicine in Chicago examined the medical records of 12,000 finasteride patients. The result: 167 men (1.4 percent) suffered from erectile dysfunction, with a higher chance of occurrence the longer they'd been taking the drug.

Hundreds of lawsuits have been filed in the United States. And five years ago, an organization was formed to raise awareness of the drug. On their website, besides sexual dysfunction, they count the neurological and psychological side effects, which include: muscle loss, fatigue, inability to concentrate, insomnia, depression and anxiety. That finasteride can cause adverse reactions is a well-established fact. Depression, however, is not explicitly mentioned in the medication's insert. It was recently discovered that these undesirable side effects could be permanent.

A very difficult situation, especially for young men

According to an article published two weeks ago in the newspaper *Welt am Sonntag*, concerns about cognitive dysfunction and depression caused by finasteride are on the rise in Germany. The Federal Institute for Pharmaceuticals and Medical Products, which is responsible for licensing the drug, has confirmed dozens of cases, including 17 cases of depression, 28 cases of sexual disorder, and 170 cases of other adverse reactions. Press officer Maik Pommer, however, points out that the possibility of these disorders has been communicated to physicians on the medicine's insert.

Should Propecia be approved for hair loss at all? Pommer believes it's too early to answer that question. The case needs further examination. On the other hand, specialist journal *The Drug Letter* has been clear on the subject for the past four years. The authors write: "We advise against the use of cosmetic treatments that have a significant potential for endocrinological side effects. Propecia should not have been authorized in the first place, and its approval should be revoked as soon as possible."

Berlin dermatologist Andreas Finner finds the situation very difficult. According to him, the studies from Chicago show that for the small percentage of men who suffer from long-term effects, the consequences are very serious. "As long as we still have minoxidil, we should not prescribe finasteride without considering its consequences."

However, Finner says minoxidil is less effective, especially in young men. Occasionally he treats patients who are under a great deal of psychological pain, who isolate themselves because of their hair loss. He wonders if the drug should be taken off the market because of a few negative incidents, especially when a causal link to the side effects is not clear. All that remains is to educate the patients.

Anyone who's unsure should not take the medication

Zurich dermatologist Ralph Trüeb calls for clarification and regulation as measures against this growing uncertainty. The former head of the Hair Department at Zurich's University Hospital says he has not encountered a case of post-finasteride syndrome in 20 years of practicing medicine. However, he would not prescribe the drug to anyone who has ever suffered from depression. He won't stop prescribing Finasteride, but "The fact that the cosmetic application of this drug has survived on the world market for twenty years definitively means something."

Hans Wolff, who has been treating patients with hair loss at LMU in Munich for 24 years, is very annoyed by the topic. "Many reports are not scientifically correct," he says. "A collective hysteria seems to have broken out in America around post-finasteride syndrome. He criticized the Chicago study, stating there is no control group that includes people who are not taking finasteride; in men under 41 years of age, only 0.8 percent suffer from persistent impotence, a percentage that could be normal for any men in that age group. Although none of his patients has experienced symptoms of persistent impotence, or post-finasteride syndrome, he still advises against taking the drug when the patient's not sure. After all, it's a lifestyle product, and minoxidil is an effective alternative.

New effective drugs against hair loss are not expected soon. And the substance that forensic pathologist Boerne anointed his hair with doesn't seem like a viable solution either.

In the TV show, side effects were discovered after testing the product on stump-tailed macaques. So what happens to Boerne is going to be entertaining to watch.