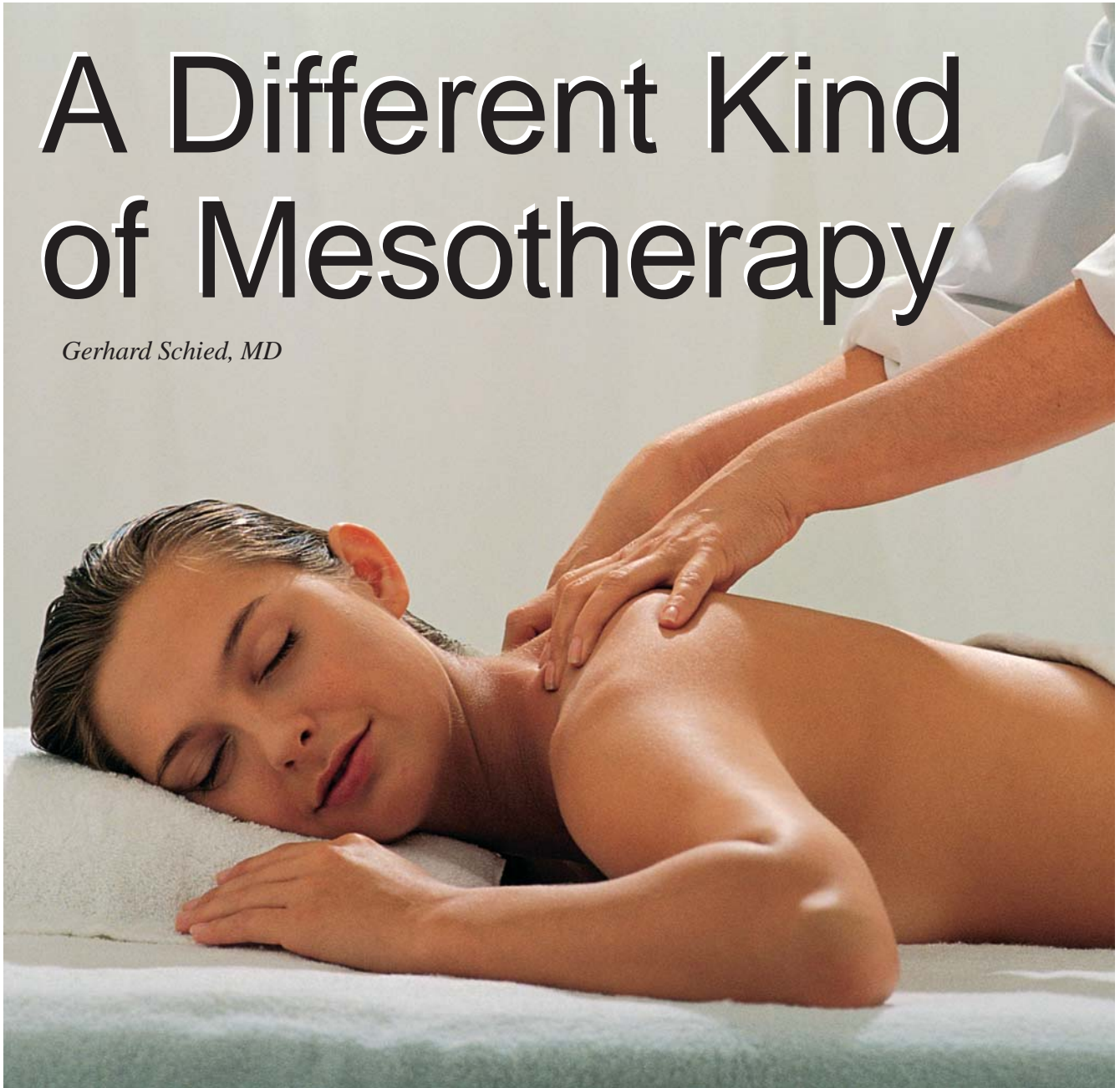


A Different Kind of Mesotherapy

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Within the last 10 years, mesotherapy has become more and more an important part of esthetic medicine in Austria. Always looking for the best kind of treatment for my patients, I started my first attempts in mesotherapy 6 years ago. I was fascinated by the idea of putting substances in the skin that are able to restore and rejuvenate damaged or aged skin. I began the treatment based on hyaluronic acid combined with vitamins like C, A, and E.

What my patients and I learned first was that mesotherapy is efficient but painful. Although I used topical anesthetic

creams, the result was nearly the same. So I thought in the beginning that I might not be skilled enough in the use of the injection gun. Within a year I learned to handle the injection gun well. This reduced pain, but not to a tolerable level for most of my patients, although they were very satisfied with the results.

Another fact of mesotherapy irritated me and my patients. We learned that results cannot be achieved immediately.

Of course vitamins need a certain time to show their effect,

but to fill up wrinkled skin with hyaluronic acid should have a quick effect. There was a good and quick result, but most of the time the positive effect was hidden by hematoma, redness, and swelling caused by the needle. So in spite of the good results, after several treatments with mesotherapy, patients asked for other, less painful treatments.

So once again I was on the search. My search ended accidentally at a workshop for fold replenishment. While other colleagues had coffee, I watched a beautician treating a patient's face with a new device (the name will be revealed in the next Journal issue). She put a lot of cream on the patient's face, and the cream seemed to vanish from the face within a short time. This was my first encounter with the "machina de la bellezza," as the Italian producer affectionately called this device.

To understand the function of the machine, I had to refresh my knowledge of physics. The words electroporation and electropulsation had not been familiar terms in my work until now. Getting more interested in this treatment, I learned that the principle of electroporation has been in use since the 1970s. It was used in genetchnology for opening pores in the cell membrane to channel in foreign DNA. Electropores are created by putting on the cell a certain kind of electrical current with a certain frequency (pulsed current). Under this treatment, electropores are created on the cell surface. These are temporary formations of watery channels which allow the passage of ions and molecules. Electropores differ in size from 40 to 250 microns and last from several seconds to several minutes.

Electroporation is also able to open the skin's outstanding barrier, the stratum corneum. It is assumed that the pulsed current rearranges the electrical "glue" holding cells together. This effect also lasts from several seconds to several minutes before the proper arrangement reasserts itself. Thus, electroporation opens a door to the skin and to the body. Now that the "door" is open, how do substances get in? This is done by electric repulsion. Most of the substances we are using have an electrical charge (positive or negative). Using an instrument with surface charging will press a substance, put on the skin beforehand, through the pores by repulsion in the skin, depending on the strength and frequency of the current. Due to the shape of the pores that are created, even neutral substances can be delivered. Remember that iontophoresis, for example, cannot deliver neutral substances and can only use preexisting pores like sweat glands, sebaceous glands, or hairs.

This theory seemed very promising, but I still had two questions. Does it really work, and does it hurt? The only way to find out was to buy this device. Unpacking my "machina de la bellezza," I found a blue and white box, with several cables, a stick looking like a pencil, and something looking like an oversized roll-on deodorant stick. After putting everything together according to the user's manual, I started my first treatment using my beloved wife. Pretty soon I got the answers to my questions.

First of all, therapy does not hurt, and it seemed to keep the promise of delivering substances into the skin in huge amounts. I now know that the device could deliver of substances applied to the skin up to a depth up to 1 cm. (The skin is 2-5 mm thick!) Even at a depth of 6 cm, 65% of the substance can be delivered.

The first substance I used was hyaluronic acid 2%. Although I was used to the skin-smoothing effect of this substance, this time it was different. I put a large amount of hyaluronic acid on the skin, and during the treatment the skin seemed to absorb it like a sponge. Fine wrinkles disappeared within a few minutes, and deep folds like the nasolabial folds flattened. The skin became fresh, healthy, and young looking. My wife and I both were excited.

Since that first trial I have done over 1,000 treatments. Not a single treatment caused pain or side effects. Of course, no side effects means that the method does not cause any side effects. Side effects may occur, dependent on the substances used.

The use of the device is various. All products used for mesotherapy can be channeled in to the skin and much deeper (up to 10 cm in the body). When I recommend a mesotherapy treatment to my patients they know there will be no needles but only a positive effect. Pain treatment, a strained joint, acne, and cellulite are only a few indications for "my machine."

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