

Treatment of migraines: Minimally invasive surgery, regenerative approach and botox

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Giorgio Pietramaggiore and Saja Scherer, MD, from the Global Medical Institute, describe a revolution in the treatment of migraines: minimally invasive surgery, a regenerative approach and Botox

Every year, approximately one billion people worldwide suffer from migraines, making it one of the most common and debilitating neurological disorders. It is estimated that up to 13% of the population is affected by this condition, impacting one in four households. The World Health Organization ranks migraine as the third leading cause of years lived with disability.

In France, nearly 11 million people are affected, with a higher incidence among women. Although medications are the standard treatment, up to 30% of patients do not find adequate relief with these conventional methods. Fortunately, medical advances, particularly minimally invasive techniques combined with cell therapy and Botox injections, developed by Doctors Saja Scherer and Giorgio Pietramaggiore, offer new hope.

What does the integrated approach of Drs Scherer and Pietramaggiore consist of?

Doctors Scherer and Pietramaggiore, renowned plastic surgeons based in Switzerland, have been pioneers in developing a holistic approach to treating refractory migraines. This approach combines the precision of minimally invasive surgery with the effectiveness of cell and Botox injections to offer patients a lasting solution.

How does minimally invasive surgery work for the treatment of migraines?

The surgical technique developed by Drs Scherer and Pietramaggiore focuses on releasing nerves that are compressed or irritated by muscular, fascial, or vascular structures. This compression is often one of the underlying causes of migraine pain and other types of chronic headaches, such as occipital neuralgia.

Dr Pietramaggiore explains, "We use micro-instruments to make minimal incisions, often hidden in the natural folds of the skin or under the hair. This method allows us to decompress the nerves without damaging them, thus directly treating one of the main sources of pain."

By preserving all nerve and muscle structures, recovery from this procedure is almost immediate. “It is important to remember to move the head immediately after surgery several times a day to prevent scar adhesions from affecting the results,” adds Dr Scherer.

Patients usually feel immediate relief after surgery and consider the procedure very light: “Just a few hours after dinner, I was able to go out for dinner and enjoy the rest of the day,” says one patient who benefited from this surgery a few weeks ago.

What is the role of cells and Botox in this treatment?

Alongside surgery, cell therapy and botulinum toxin (Botox) injections play a crucial role. Concentrated stem cells, extracted by liposuction with a very fine cannula and then filtered, possess mechanical (nerve protection) and biological (regenerative capacity) properties. This minimally invasive approach presents only minimal risks. The positive effects of the cells manifest progressively over three to six months.

“Once the cells are engrafted, they will stay forever in place”, says Dr Pietramaggiore.

Initially used for aesthetic applications, Botox has proven effective in relieving migraines by temporarily paralyzing muscles that can contribute to nerve compression. “Botox helps reduce muscle tension around the head, thus complementing the effect of surgery by prolonging its benefits and minimizing relapses,” says Dr Scherer. “Botox also has a neuromodulatory effect by inhibiting pain transmission.”

More and more patients report that after Botox injections, migraines and other forms of headaches improve significantly, making the head feel finally lighter. “Botox for migraines has really been a game changer: patients have significantly fewer headaches and, as a consequence, need fewer medications and feel much better in general, sometimes forgetting about the headaches”, says Dr Pietramaggiore.

How are patients selected for this treatment?

The effectiveness of this combined approach strongly depends on the appropriate selection of patients. The ideal candidates are those who have not found relief with drug treatments and whose quality of life is severely affected by migraines.

“We perform a comprehensive evaluation, including diagnostic tests, to precisely locate the source of the pain and determine the patient’s suitability for the procedure,” adds Dr Pietramaggiore.

“Since patients come to Switzerland from all over the world, we start the process by sending some formularies to understand if our approach could help. Once we verify the patient’s case, we have a video interview to investigate the migraines better. Then, only when we believe that we could be of help do we invite the patient for a visit to our clinic in Switzerland,” adds Dr Scherer.

What results are obtained with this approach?

Studies show a long-term positive effect of this surgery on several hundred patients. One year after the operation, 35% of patients had no migraine symptoms at all. For another 50% of patients, the frequency of attacks and the intensity of pain had decreased by more than half.

The minimally invasive intervention specific to occipital neuralgia developed by Drs Scherer and Pietramaggiore has an even higher success rate, with more than 90% of patients experiencing significant improvement after the operation.

“Occipital neuralgia is different from other migraines and chronic headaches, as it causes constant pain in the back of the head, sometimes irradiating through the eyes and feeling like a burn or electric shock on the scalp. The pain is constant as it is caused and worsened by mechanical compression in the back of the head on the occipital nerves. In this case, mechanical relief, like in carpal tunnel surgery, offers an immediate relief”, argues Dr Pietramaggiore.

Currently, this treatment is offered by Drs Scherer and Pietramaggiore at the Global Medical Institute in Lausanne. They are the only ones in Switzerland trained in these techniques in the United States, where they were developed about fifteen years ago.

The basic techniques that we learned are much more invasive and require much longer downtime. Thanks to the minimally invasive approaches, patients recover almost immediately from surgery and can return to their lives faster, trying to recuperate the lost time due to migraines,” says Dr Scherer.

Patient testimonials, such as that of Claudine, who says, “I can work again, go out, go to a restaurant without fear of attacks, and finally enjoy life. Sometimes I realise that I do not carry migraine drugs with me in my bag, which never happened before” illustrate the significant impact of this approach. After years of suffering, these treatments have allowed many patients to regain their everyday lives.

The convergence of minimally invasive surgical techniques, cell therapy, and Botox by Drs Scherer and Pietramaggiore represent a promising advance in the treatment of migraines. This innovative approach offers not only immediate relief but also a long-term solution, significantly improving the quality of life for migraine patients. As research continues to evolve, these techniques are already making a significant difference between suffering and fulfilling life for those facing the challenges of chronic migraines.

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The Global Migraine Clinic in Lausanne

The Global Migraine Clinic in Lausanne specializes in treating migraines using botulinum toxin injections and minimally invasive surgery.

