

May, 2016 **2**

LA&HA magazine

Laser and Health Academy

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**New minimally invasive laser
gynecological treatments**

**The safest, quickest and
easiest procedure for SUI
and vaginal relaxation syndrome**

**Trends in cosmetic
gynecology**

The Future of Gynecological Lasers is Now

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The *Journal of the Laser and Health Academy* (an international peer reviewed scientific journal) and the *LA&HA Magazine* (published for general readership) follow new trends and progress-proven practices in the use of lasers in medicine and related sciences.

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Editorial

Smoothing out gynecological taboos

When the Er:YAG wavelength was introduced to gynecology 15 years ago, it was simply as a more precise alternative to CO₂ laser treatments. But the foundation was also set for a whole new approach to resolving two of the most common, yet frustrating gynecological and urological conditions: stress urinary incontinence and vaginal laxity.

With the introduction of a non-surgical Er:YAG gynecological procedure to the medical community in 2011, a revolution began that is making these treatments safer, faster and easier than ever. By enabling former surgical treatments to become 'walk-in/walk-out' procedures that are performed in minutes, the new techniques have imparted renewed life and meaning to the gynecology profession. Practitioners now have a powerful set of minimally invasive tools that will enhance their contribution to their chosen field, their careers and, of course, to the patient community.

We will examine these new techniques and their implications in this issue of LA&HA magazine by presenting the practices of some of the most renowned and established specialists in the field from around the globe. But first, we'll take a look at how it all began and how it has forever changed this delicate area in gynecology and urology, and finally we'll conclude with some enlightening 'customer satisfaction' testimonials.

We are now at the dawn of a new era of laser gynecology and urology. Debunking a widespread taboo to which women have been subordinated for so many years, in such an advanced manner, is much more than just 'the next new approach'. It is a revolutionary new dimension in the mission of a medical practitioner.

Welcome to the future of Gynecology!

Dr. Branka Korosec

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Something still not talked about

An interview with Prof. Dr. Adolf Lukanovic, medical director of the Department of gynecology and obstetrics of the University Medical Center Ljubljana **By Edita Krajnovic**

Although every fourth sexually active woman suffers from SUI, many find it very difficult to talk to their doctor about such intimate things, notes OB/GYN Prof. Dr. Adolf Lukanovic. Despite the prevalence of SUI and its accompanying embarrassment and diminished quality of life, many women who experience symptoms do not seek medical treatment due to embarrassment, lack of knowledge or fear that the treatment will require surgery.

ABOUT PROF. DR. ADOLF LUKANOVIC

Prof. Dr. Lukanovic became an OB/GYN specialist in 1986 and is currently the medical director of the Department of Gynecology and Obstetrics, University Medical Center Ljubljana, Slovenia and Professor of gynecology and obstetrics at the Faculty of Medicine of the University of Ljubljana. His primary interests are the problems of operative gynecology and urogynecology.

His research work is dedicated to the study of new surgical methods in gynecology: introducing minimally invasive surgical approaches, urological complications following radical gynecological surgery and new modalities in the treatment of female urinary incontinence. His main field of research is evaluating and introducing new diagnostic measuring techniques and new conservative surgical methods in the treatment of female urinary incontinence for clinical practice.

Prof. Dr. Lukanovic is the president of the Slovenian Association of Gynecologists and Obstetricians, president of the Slovene Urogynecological Society and past president of the Slovenian Incontinence Association. In 1991 he became a founding member of the International Society of Ultrasound in Obstetrics and Gynecology. From 2004 to 2008 he was the European International Board Member of IUGA.

What are the main causes of SUI?

Prof. Dr. Lukanovic: The etiology of stress incontinence is not completely understood, although it is known that identifiable risk factors for the condition include pregnancy, childbirth, menopause, cognitive impairment, obesity, and advanced age.

Weakened and injured connective tissue of the pelvic floor also has a lot to do with unwanted and unintended leakage of urine, or SUI. Connective tissue is as important as muscle tissue. Excessive distension of connective tissue affects the function of the pelvic floor muscles and prevents the optimum overlap of the muscle fibers, which is a prerequisite for their optimal performance. Decreased elasticity of the connective structures of the vaginal wall is the result of genetic predisposition, injury, pregnancy and childbirth, and the process of aging. Decreased elasticity of connective tissue causes sagging of the bladder over the anterior wall of the vagina and changes the anatomical relationship between the bladder and the urethra, resulting in a decreased functional closing of the full bladder.

What are the current treatments for SUI?

Prof. Dr. Lukanovic: There are many possible non-surgical and surgical therapies for female SUI. Initial treatments should include non-surgical therapies, such as behavioral changes, physiotherapy and pelvic floor muscle exercises and reeducation of the bladder. This involves training the bladder by persistently and deliberately prolonging the time until the next urination, until about three to four hours. Keeping a diary of urination also helps.

If these methods are not successful, a doctor familiar with the patient can select the best treatment for incontinence, whether electrical or magnetic stimulation, treatment with drugs or surgery (mainly for stress incontinence), laser treatment, or a combination of various therapies. Surgical procedures are more likely to cure stress urinary incontinence than non-surgical procedures but are associated with more adverse complications.

When is it advisable to try “special surgical techniques”?

Prof. Dr. Lukanovic: Together with the clinical staff of the Institute of Genetics, our gynecology clinic has recently launched a study seeking answers to the ques-

Laser phototherapy affects the metabolic processes of collagen, accelerates its formation and, hence, the tightening of the vaginal wall, which also improves sexual sensation.

If less invasive treatments become widely available, more patients may be willing to seek care without the fear of surgery. Researchers are therefore actively searching for minimally invasive treatments that offer good efficacy, safety and short recovery periods.

tion of why both urinary incontinence and pelvic floor disorders are so common, and if there is any connection to specific genetic predisposition. Therefore, all women planning to have surgery will be genetically tested and specific genes will be analyzed. Doctors hope to find a link between changes in genes and disease, and so be able to better anticipate the success of the operation. “No operation is one hundred percent successful, so the physician is obliged to explain the success rate of each surgical technique. If we had information about genetic predisposition we could more accurately predict the success rate of each surgical technique.

Regarding special techniques, we have in mind the use of prosthetic materials for better support for weakened bladder and pelvic floor tissue. Nowadays the most popular methods are TVT (tension-free vaginal tape) and TOT (transobturator tape), which are used to strengthen the support of the urethra, and in the case of pelvic organ prolapse, larger meshes are used that return the prolapsed organs to a normal position.

Also, urethral bulking agents have been used extensively to treat patients with stress urinary incontinence due to intrinsic sphincter deficiency. In the past, autologous fat cells, silicone, teflon, collagen, micro balloons and synthetic materials were used. Nowadays we increasingly use polyacrylamide hydrogel, which consists of 2.5 percent polymer particles dispersed in 97.5 percent water.

You have also been successful in treatments with stem cells?

Prof. Dr. Lukanovic: Yes, in Ljubljana, stress urinary incontinence is also successfully treated with the transplantation of stem cells, which is considered one of the greatest professional achievements of Slovenian gynecologists, considering that such interventions are performed in only a few centers worldwide. Although as a source of autologous (the patient’s own) pluripotent cells, bone marrow is the most commonly used, this method of obtaining stem cells has its weaknesses. The procedure is painful and is therefore often associated with the use of general or spinal anesthesia, and the number of obtained stem cells may be small. Alternative sources of stem cells may be muscle or adipose tissue, which we can acquire in greater quantities and with only local anesthesia. This method shows great potential.



What are some new minimally invasive approaches in the treatment of SUI?

Prof. Dr. Lukanovic: In severe cases, invasive methods are the only option. But it is true that many patients avoid invasive methods because they are afraid of surgeries. Studies have shown that if less invasive treatments become widely available, more patients may be willing to seek care without the fear of surgery. Researchers are therefore actively searching for minimally invasive treatments that offer good efficacy, safety and short recovery periods.

I am very pleased that we are performing a clinical study on laser therapy for stress urinary incontinence and vaginal tightening. The therapy shows great results in the reduction of uncontrolled leakage of urine. Laser phototherapy promotes collagen remodeling and tightening of collagen fibers. Previous experimental and clinical studies have shown favorable effects in various diseases and conditions that result from damaged collagen fibers. Laser

Men have a very quick solution for their dysfunction – a little blue pill. So why shouldn't women seek help with laser treatment?

phototherapy affects the metabolic processes of collagen, accelerates its formation and, hence, the tightening of the vaginal wall, which also improves sexual sensation. The result of the laser treatment is better support to the urethra and bladder neck, so we expect fewer problems with uncontrolled leakage of urine.

Regarding the sexual aspect of the treatment, does the laser treatment significantly improve quality of life in this area?

Prof. Dr. Lukanovic: This topic is still a bit of taboo but of course it is very important. Problems with the loss of optimal vaginal structure after child birth and with advancing age are connected to impaired sensations during sexual intercourse. By some reports, approximately 40% report dissatisfaction concerning their ability to achieve sexual gratification due to vaginal relaxation, which interferes with the intensity of contact during sexual intercourse. Laser treatment also enhances flexibility and contraction of the vaginal wall, so we can expect better feeling and more satisfaction when having sexual intercourse. Men have a very quick solution for their dysfunction – a little blue pill. So why shouldn't women seek help with laser treatment?-*

TYPES OF URINARY INCONTINENCE

Stress urinary incontinence is the most common type of incontinence, and does not have much in common with mental stress as may be expected. It is defined as the involuntary loss of urine with increased pressure in the abdominal cavity in the absence of detrusor contraction (muscle of the bladder), during coughing, sneezing, or during physical exertion such as sporting activities or sudden changes in position, lifting heavy objects, etc. The most common cause is changed position of the bladder neck due to damage of the nerves and muscles of pelvic floor.

Stress urinary incontinence is estimated to affect between 4% to 14% of younger women and more than 50% women in postmenopausal period. The etiology of stress incontinence is not completely understood, although it is known that identifiable risk factors for the condition include pregnancy, childbirth, menopause, cognitive impairment, obesity, and advanced age.

Urge incontinence is a "sudden and involuntary loss of urine" prior to a strong desire to urinate. It most commonly occurs on the way to the toilet, listening to water flow, or in contact with cold water. The main cause of urge incontinence is the uncontrolled contraction of the bladder, and the result is very frequent urination, especially during the night.

Mixed incontinence is a combination of stress and urge incontinence.

Overflow incontinence is the scientific name for urine leakage due to weak bladder muscles as a result of impairment of the nervous system or urethral obstruction; urine drains from overflowing of the bladder. In men, the cause can be an enlarged prostate; otherwise it can occur after gynecological operations and because of various inflammations that may cause constriction of the urinary tract. It is characterized by the passage of urine by drops and the feeling of incomplete emptying of the bladder after urinating.





New minimally invasive laser gynecological treatments

And here comes the laser ...

By Dr. Masa Gorsic

Lasers can provide exceptional versatility – delivering gentle ablative and non-ablative thermal treatments for an ever-expanding range of applications. The latest innovative solutions in laser technology have led to the development of new, minimally invasive treatments for common gynecological conditions such as incontinence and vaginal relaxation syndrome. Fotona has developed two novel treatments – IncontiLase® for stress and mixed urinary incontinence and IntimaLase® for vaginal relaxation syndrome*.

IncontiLase®
IncontiLase® is a non-invasive Er:YAG laser therapy developed by Fotona for the treatment of stress and mixed-urinary incontinence (SUI). IncontiLase® is based on a non-ablative photothermal stimulation of collagen neogenesis, shrinking and tightening of the vaginal

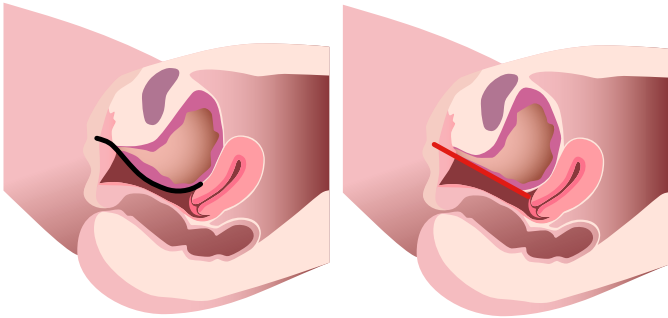
mucosa tissue and endopelvic fascia, and subsequently enhanced support to the bladder.

How does IncontiLase® work
A 2940 nm Er:YAG non-ablative laser with proprietary “SMOOTH mode” technology (Fotona) is applied to the vaginal tissue, stimulating collagen remodeling and the synthesis of new collagen fibers in the region of the vestibule and urethral orifice, as well as in the area along the anterior vaginal wall.

The positive effect on the symptoms of stress urinary incontinence has been attributed to neocollagenesis and collagen remodeling. The objective of the non-ablative laser treatment is to achieve selective, heat-induced denaturation of dermal collagen that leads to subsequent new collagen deposition, with as little damage to the epidermis as possible. The shortening of collagen along the longitudinal axis occurs under the influence of specific temperatures from 61°C to 67°C, which the laser applies for only short microseconds, avoiding pain or injury. In addition to the instantaneous collagen and tissue shrinkage reaction, the processes of collagen remodeling and neocollagenesis continue, and at the end of these processes the treated tissue becomes enriched with new collagen and is tighter and more elastic.



Fotona SMOOTH mode treatment of the anterior vaginal wall



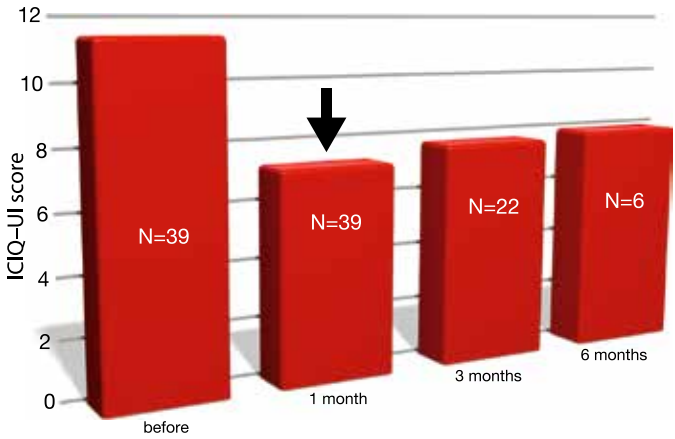
Mild and moderate stress and mixed urinary incontinence After IncontiLase® treatment

The final result of collagen neogenesis is the shrinking and tightening of the vaginal mucosa tissue and collagen-rich endopelvic fascia, and subsequently greater support to the bladder and the return of normal continence function.

The IncontiLase® procedure is incisionless and virtually painless, with no ablation, cutting, bleeding, or sutures. Recovery is extremely quick without need for the use of analgesics or antibiotics. Usually two sessions are recommended to alleviate mild or moderate stress urinary incontinence. No special pre-op preparation or post-op precautions are necessary, and patients can immediately return to their normal everyday activities.

Scientific results from clinical studies show excellent improvement for mild and moderate stress urinary incontinence:

- Almost 70% of patients are dry after 120 days.
- 94% of patients reported improvement.
- Improvement of SUI in all measured parameters.
- No adverse events were noted.



The degree of incontinence and its impact on the quality of life was assessed with the ICIQ-UI SF questionnaire before the treatment and at 1, 3 and 6 month follow-ups. The score significantly improved after the IncontiLase® treatment.

IntimaLase®

IntimaLase® is a unique, patent-pending Er:YAG laser therapy for incisionless, non-invasive photothermal tightening of the vaginal canal. The indication for IntimaLase® is vaginal relaxation syndrome, which is the loss of the optimum structural form of the vagina. This condition is generally associated with overstretching of the vaginal canal during childbirth as well as with natural aging.



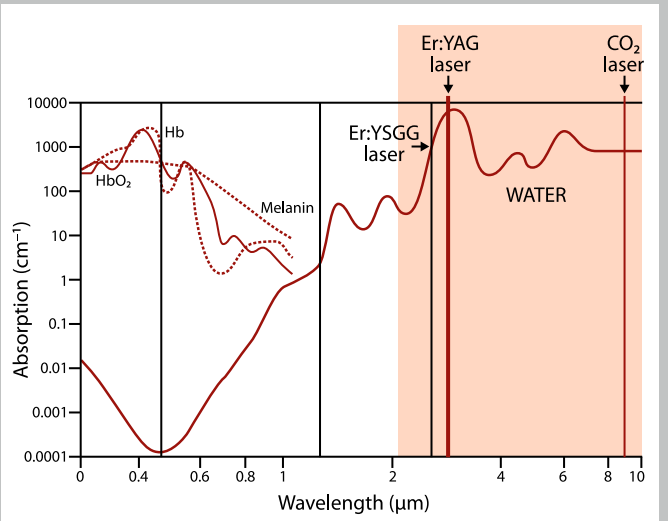
The first phase of IntimaLase® treatment: laser speculum and circular adapter enable delivery of a 360° radial laser beam.

How does IntimaLase® work?

As with IncontiLase®, the same 2940 nm Er:YAG non-ablative laser with proprietary “SMOOTH mode” technology is applied to the vaginal tissue, stimulating collagen remodeling and the synthesis of new collagen fibers in the vaginal mucosa tissue and collagen-rich endopelvic fascia. Precisely controlled SMOOTH mode

WHY Er:YAG LASER?

The Er:YAG laser has the highest absorption in water, with its wavelength of 2940 nm being located at the peak of water absorption. The optical absorption depth of Er:YAG laser light in a mucosal tissue is very small, making this laser a perfect candidate for the superficial thermal treatment of vaginal walls.

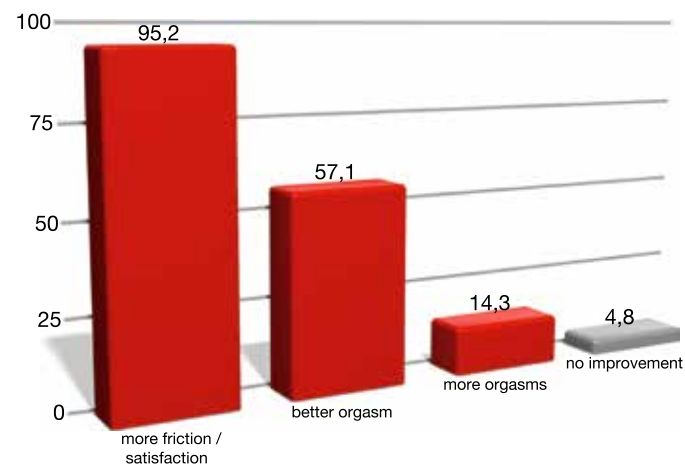


laser energy pulses delivered to the vaginal canal and introitus area cause heating of the tissue and collagen within. Heating of collagen causes its immediate contraction, fibers become shorter and thicker and consequently the irradiated tissue contracts and shrinks. Aside from a momentary collagen and tissue shrinkage reaction, the processes of collagen remodeling and neocollagenesis continue and at the end of these processes the treated tissue becomes enriched with new collagen, appearing younger, tighter and more elastic, thus improving vaginal laxity and reducing the effects of vaginal relaxation syndrome. The final result of this collagen neogenesis and remodeling is tightening of the vaginal canal.

As a non-ablative, minimally invasive procedure, IntimaLase® represents a safer, faster and more patient-friendly solution that avoids the undesirable complications present with other vaginal tightening methods. Clinical results show a tightened vaginal canal, greater sexual satisfaction and significant improvement in a patient's quality of life. Usually two sessions are recommended, and no special pre-op preparation or post-op precautions are necessary. Patients can immediately return to their normal everyday activities.

The latest scientific results for IntimaLase® clearly show great improvements in vaginal tightness and sexual gratification:

- 95% assessed the change of their vaginal tightness as strongly or moderately improved after IntimaLase treatment.
- The average shrinkage of the vaginal canal after IntimaLase treatment was 17%.
- Patients reported a high level of satisfaction with the procedure (97%).



95% of patients reported improved sexual gratification after IntimaLase® treatment

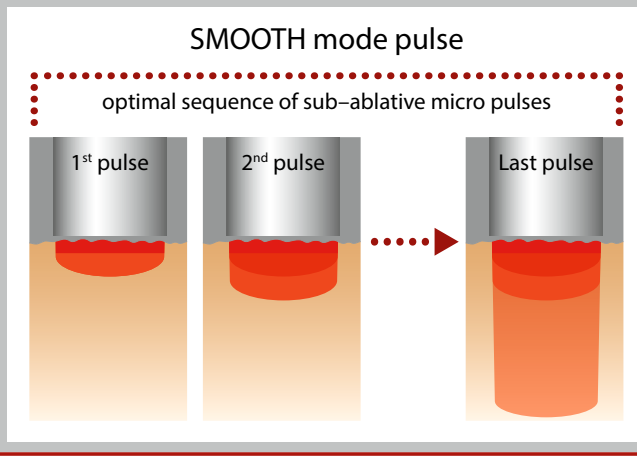
The remarkable results with IncontiLase® and IntimaLase® truly speak for themselves, underscoring how laser technology is rapidly revolutionizing the field of gynecology with a new class of innovative, highly effective and non-invasive applications that produce dramatic results without undesired side effects or contraindications. ✱

SMOOTH MODE TECHNOLOGY

SMOOTH mode delivers Er:YAG optical laser energy in temporally optimally-spaced, short laser pulses designed to prevent temperature build-up at the surface and to achieve homogeneous heating within a several-hundred-micron thick superficial layer of the mucosal tissue.

The specially developed "SMOOTH mode" technology utilizes this optimal laser wavelength that is absorbed within a few microns of mucosal tissue, thus avoiding any damage to deeper-lying tissues and organs.

The mucosal tissue is treated in a "smooth", almost "feather-like" non-ablative manner, without any bleeding and with a controlled temperature deposition that eliminates the risk of tissue necrosis.



* The new technology for gynecology was developed as a spin-off of the initial phase of SmartMed program of the EU regional Competency Center for Biomedical Engineering (CC BME; www.bmecenter.com)



Fotona®
choose perfection

FotonaSmooth®XS

Laser designed for minimally-invasive gynecological treatments

- 2940 nm Er:YAG
- Exclusive SMOOTH mode for non-ablative vaginal collagen neogenesis and remodeling
- Fotona Multi-pulse technology for controlled laser tissue interaction
- Wide range of gynecological procedures
- Additional aesthetic procedures
- No consumables



For availability in your country please contact our local distribution partner or your national regulatory body.

www.fotona.com

More than 10 Years of Er:YAG Laser Gynecology

By Marcelo Tettamanti

Fotona's first experience with using Er:YAG laser technology in gynecological treatments dates back to January, 2000, when one of the company's most prominent reference doctors, Dr. Claudia Pidal from Argentina, partnered with a gynecologist to use a Fotona Fidelis laser for treating vaginal tissue (using an R06 handpiece with a 1 mm diameter and 18 mm long contact fiber). Although the results were impressive (the treatment was effective and painless), it was somewhat slow and cumbersome due to the need for contact with tissue located deep in the vaginal canal. In less than 2 months, however, Fotona's R&D promptly developed a new handpiece to address these issues, and the R09-G2 was born, featuring a 4 mm spot collimated beam that allows for comfortable aiming and treatment of all vaginal surfaces.

From precise ablation ...

In the following year, a long list of ablative procedures were described in the first gynecological applications manual, which included the treatment of human papillomavirus infections, cervical ectropion, vulvar intraepithelial neoplasia, dystrophic lesions, melanosis and many other conditions. Thousands of such procedures were performed in many Latin American countries with an impeccable record. No complications and high rates of success were reported when performing ablation of the lower genital tract, treatment of multifocal and multicentric lesions, excisions and tissue coagulation. Anecdotally, many patients would comment that these ablative procedures would have the curious side effect of producing vaginal tightening, which was reflected in an unexpectedly enhanced sexual experience. This discovery set the pace for a long road that has led to a huge revolution in gynecology – one that will change the standards of how many vaginal treatments are performed in a wide spectrum of applications.

... to controlled non-ablative procedures

The next big moment that put Fotona's technology in the spotlight of innovation came with the development of SMOOTH Mode. With the advantage of precisely controlled, sequentially packaged bursts of Erbium long pulses, professionals could now move into the field of treating mucosa by producing thermal tightening and new collagen development in a non-invasive manner. The first experiences in targeting mucosal tissue were intra-orally. Applying several passes of SMOOTH Mode pulses on the soft palate produces tissue contraction, which is an ideal non-invasive method to treat snoring and apnea complications.

Many patients would comment that these ablative procedures would have the curious side effect of producing vaginal tightening, which was reflected in an unexpectedly enhanced sexual experience. This discovery set the pace for a long road that has led to a huge revolution in gynecology.



From left: Z. Vizintin, Dr. J. Gaviria and M. Tettamanti

Fine-tuning

Following this, another treatment was developed by Dr. Luis Mansilla from Buenos Aires to eliminate nasolabial folds and perioral wrinkles. The new treatment used the same method of intra oral fractional tightening, with the benefit of no need for anesthesia, no pain and immediate outcomes. After observing these excellent results, it was a simple conclusion that similar success could be achieved by applying this collagen rejuvenating treatment to vaginal tissue.

Several Latin American experts with vast experience in the field of lasers in gynecology were gathered to fine-tune treatment parameters and reshape the hardware that was required. Dr. Adrian Gaspar from Mendoza, Argentina, Dr. Jorge Gaviria from Caracas, Venezuela, and Dr. Paulo Guimaraes from Brasilia, Brasil, took the research to higher levels by establishing painless, safe and effective protocols that established the FotonaSmooth laser's exclusive leadership as the pio-

The results achieved to date and the positive feedback received from customers and patients confirm that this product line has a brilliant future in a worldwide market.

neering system for treatments such as Stress Urinary Incontinence (IncontiLase®) and Vaginal Relaxation Syndrome and Vaginal Atrophy (IntimaLase®). In the past two years, this spectrum of applications has been further enhanced by Dr. Juan Carlos Montalvo from Santa Cruz, Bolivia, who has performed hundreds of treatments covering surgical aspects such as laparotomies, laparoscopies and hysteroscopies in his state-of-the-art clinic.

The results achieved to date and the positive feedback received from customers and patients confirm that this product line has a brilliant future in a worldwide market thirsty for new and better treatments performed with reliable technology. ✱



Experts

Experts

“It is my great satisfaction to discuss this new method with colleagues from different countries and cultures.”

An interview with Dr. Ivan Fistonic, MD, PhD, specialist in obstetrics and gynecology **By Marusa Bertoncej**

Dr. Fistonic, you were the first gynecologist in Europe to undertake research on a pioneering new gynecology laser treatment – what made you decide to get involved with laser medicine?

Dr. Fistonic: It was actually by chance. I was invited to Moscow, where Dr. Maletic, my close friend and colleague, held a workshop on laser applications in aesthetic medicine. An offer to become involved with researching these new laser techniques for gynecological use was first extended to me on this occasion by Mr. Zdenko Vizintin, a research specialist from Fotona. Mr. Vizintin had initiated a discussion on these new minimally invasive applications, which are nowadays known as IntimaLase® and IncontiLase®.

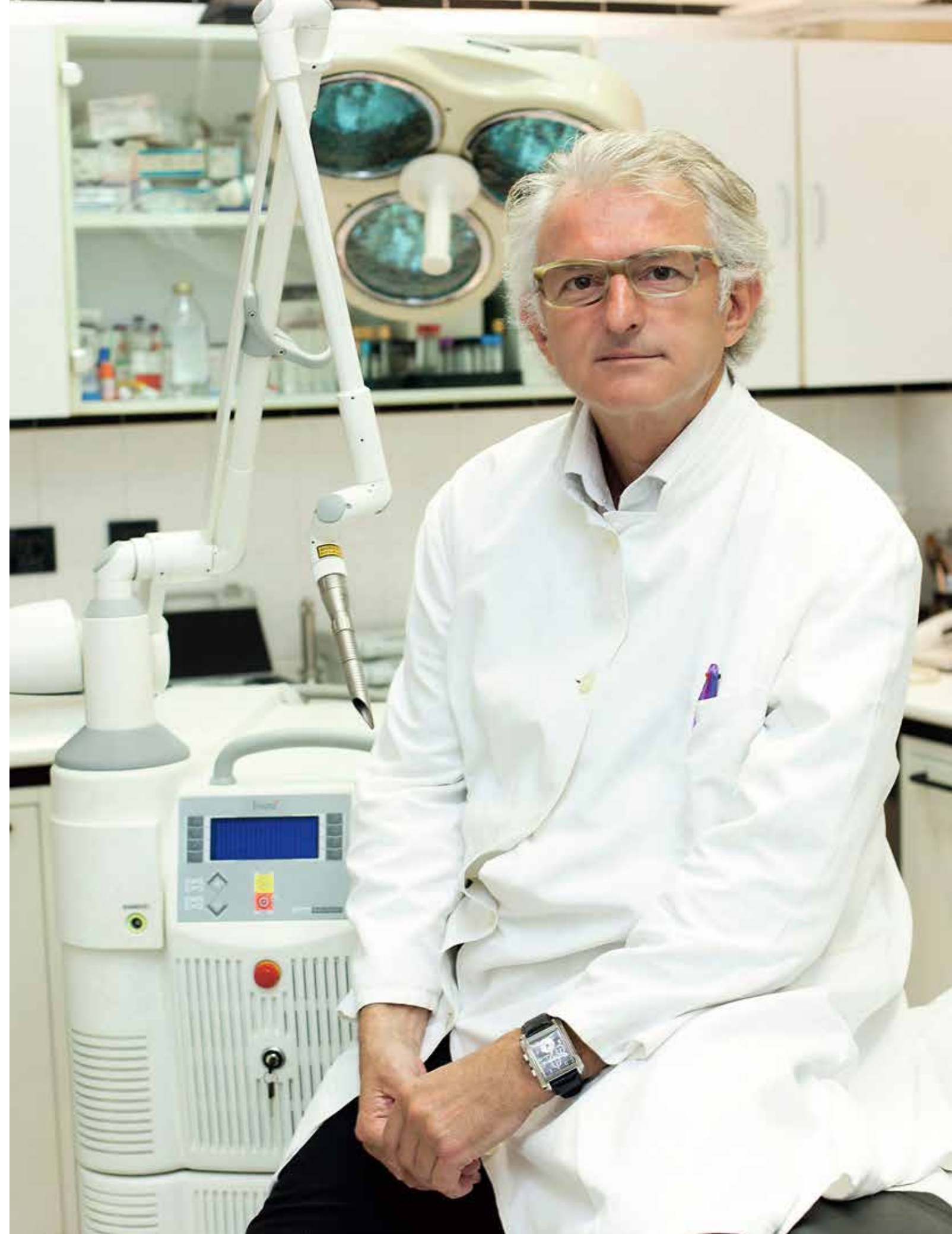
Did you receive any support from fellow colleagues and researchers?

Dr. Fistonic: The first attempts at research in this field were started by Dr. Rivera from Bolivia in 2009. His support and pioneering ideas were the trigger for the start of a project I am running at the Medical School University of Rijeka, Croatia. The study's goals include the assessment of the efficacy of laser treatment of stress urinary incontinence of lower grades, and the efficacy of laser treatment of sexual gratification in women with vaginal relaxation due to multiple vaginal births.

ABOUT DR. IVAN FISTONIC

Dr. Fistonic graduated in 1978 from the Faculty of Medicine in Zagreb, Croatia and accomplished his specialisation in gynecology and obstetrics at the Sestre milosrdnice clinical hospital. In 1994 he received his masters degree and in 2001 his doctorate degree from the Faculty of Medicine in Zagreb. He specializes in the problems of menopause.

Dr. Fistonic is a secretary of the Croatian Society for Menopause and a member of the Croatian Society for Gynecology and Obstetrics (HLZ), the International Menopause Society (IMS), the European Menopause and Andropause society (EMAS) and the North American Menopause Society (NAMS). He is the author of numerous published scientific papers. He actively participates in a number of national and international congresses and symposia.





I was a little skeptical when I started using a laser beam for vaginal applications. I have to admit now that I've become entirely convinced about the efficacy of the method.

The most important thing is to share the information widely, developing interactions that will undoubtedly improve not only the method itself but also universal comprehension of preventive treatments for stress urinary incontinence and vaginal relaxation syndrome.



Dr. I. Fistonic and Dr. F. Saracoglu in Croatia

Did you have any prior experience in using a laser? And were you initially apprehensive about using laser technology for gynecology?

Dr. Fistonic: Not at all. Honestly, I was a little skeptical when I started using a laser beam for vaginal applications. That is why I developed a protocol that involves several metric parameters assessing the profile of pelvic muscle strength before intervention and during follow-up visits. I have to admit now that I became entirely convinced about the efficacy of the method.

Was it difficult to recruit patients for the study? And how did your patients react to the treatment?

Dr. Fistonic: At first it was a great challenge to present a new and untested method to my female patients. The initial consultations were lengthy but the interest that my patients expressed had built up my optimism.

What aspects of the research were difficult to overcome?

Dr. Fistonic: In general it is very difficult to overcome multiple obstacles in the professional community when promoting new ideas. That is why any serious research

has to be crowned by publication in a relevant, high impact journal. The research itself was fairly easy with those patients who chose the laser as the intervention method. On the other hand, those who decided for the Kegel method were less compliant, and there was a significant drop out rate from the study in the control group.

Were you surprised by the results of the study? What in particular stood out?

Dr. Fistonic: The most surprising finding was that the laser effect on collagen retraction has extended for over six months, approaching one year, according to my latest measurements.

Do you enjoy lecturing and training other gynecologists in the field of laser gynecology?

Dr. Fistonic: It is my great satisfaction to discuss this new method with colleagues from different countries and cultures. The most important thing is to share the information widely, developing interactions that will undoubtedly improve not only the method itself but also universal comprehension of preventive treatments for stress urinary incontinence and vaginal relaxation syndrome ✱

“With the right technology, I could meet patient expectations and differentiate my practice.”

An interview with Prof. Adrian Gaspar, director of the Argentine Institute of Aesthetic Medicine and Laser Gynoplasty **By Daniel Levec**

What inspired you to immerse yourself into the world of medical lasers?

Prof. Gaspar: After graduating I quickly discovered how difficult it was to establish a fast growing practice. My vision was that with the right technology, I could meet patient expectations and differentiate my practice in a very competitive market. This required a leap of faith since at that time it was a very significant financial decision. Fortunately it paid off and I have no regrets.

How do you establish a pricing strategy for the laser treatments that you currently offer?

Prof. Gaspar: Fortunately for my practice, gynecology laser practitioners are still a small percentage of the market. This provides some flexibility to decide for an optimal pricing strategy without having to focus on using “market prices” as would happen with conventional non-laser treatments. I would always recommend establishing a two-stage approach to maximizing practice growth. In the first phase it is critical to attract as many patients as possible and to make the treatment very affordable, thereby creating a large base of satisfied patients who can refer friends and family. The Fotona approach to laser design has helped me to be successful in this concept since there are no consumables, the procedures are performed in only 10 minutes in an ambulatory manner, thus keeping my treatment costs very low. Once you notice that the patient appointment calendar is pretty full for an extended time, that’s a signal that it’s time to enter a new phase in which you can make price adjustments that will maximize your return.

From the diverse applications in gynecology currently offered by the FotonaSmooth® laser, which would you consider as revolutionary in your daily practice?

Prof. Gaspar: After traveling to many countries and meeting colleagues that are currently using Fotona’s technology, I must admit that I have found different answers to this question. This of course has to do with a combination of local cultural lifestyles as well as the practitioner’s main focus. Personally I use almost all of its applications but most users have been delighted with the results produced by IntimaLase® and IncontiLase® since we can achieve great improvement without causing any unwanted side effects or pain, either during or after the procedure.

About 50% of gynecologists have also incorporated aesthetics applications and found them to be very rewarding, with high customer satisfaction.

The use of the FotonaSmooth® laser has set a new standard of treatment for my practice: we are able to move away from long-term hormone replacement therapies toward a laser light treatment that has the patient symptom-free for many months with no adverse complications.



Prof. Gaspar conducting an aesthetic gynecology workshop at his clinic in Mendoza, Argentina.

What future gynecological applications do you envision for Fotona’s Erbium SMOOTH mode laser technology?

Prof. Gaspar: I’m very enthusiastic about a research project that I have been working on for several months that addresses the treatment of urethral sphincter deficiency. As defined by the International Urogynecological Association, every stress urinary incontinence case has some degree of urethral sphincter deficiency. I believe that we can enhance our treatment results by providing a focalized laser treatment to this particular area by taking advantage of the Erbium laser’s SMOOTH mode ability to provide the affected tissue with improved trophism and the necessary biostimulation to recover its function. I look forward to sharing these results as soon as we conclude our investigation of optimal parameters for effective treatments.

How do you attract patients? Is there any advice that you could give to clinics starting to promote these treatments?

Prof. Gaspar: Advertising strategies vary among different cultures, but I can certainly share some concepts that I believe are pretty universal and that have helped me with promoting my practice. First, market your new laser treatments well in advance to starting your actual laser activity. Don’t wait until you have finished your laser installation and education to start your laser-practice patient recruiting. This is a long process that involves talking to patients that attend your practice daily and sending out information to new potential patients. Working in advance to start your laser practice will strongly set you on a successful path right from the beginning. This is one of the great advantages I have found when starting with the Erbium SMOOTH mode. Having a very short learning curve and no fears of clinical complications

About 50% of gynecologists have also incorporated aesthetic applications and found them to be very rewarding, with high customer satisfaction.

allowed me to put my laser practice in full gear right from the start. And secondly, always let your happy laser patients know that you would highly appreciate it if they would share their success story with those friends or family members who may benefit from this procedure. It is a common mistake to assume that they will automatically do so. Sometimes they may send you a special gift or a nice letter to express their gratitude, simply because they don’t know what you appreciate the most.

Which other laser gynecological treatments beside IntimaLase® and IncontiLase® do you offer?

Prof. Gaspar: We are very successfully treating a wide variety of protocols that range from non-invasive to minimally invasive treatments, among which I could name ectropion, benign lesions, condilomas, labial and vulvar melanosis, HPV and several aesthetic procedures. I’m especially thrilled with the positive results we’ve had when treating vaginal atrophy. The use of the FotonaSmooth® laser in this very common pathology has set a new standard of treatment for my practice. We are able to move away from long-term hormone replacement therapies that have received negative media attention and created concern in our patients, and toward laser light treatments that have the patient symptom-free for many months with no adverse complications.✱



ABOUT PROF. ADRIAN GASPAR

Prof. Gaspar is an OB/GYN specialist, cosmetogynecologist, associate professor at the Gynecology Department of the Faculty of Medicine at Mendoza University, Argentina, and an owner and director of the Prima Piel Clinic in Mendoza, Argentina. He received his medical diploma from the Graduate School of Medical Sciences of Universidad Nacional de Cuyo in Mendoza, Argentina in 1995, followed by four years of postgraduate study in Gynecology and Obstetrics at the Hospital Italiano de Mendoza, Argentina.

With more than ten years of education and experience in the use of lasers in medicine, Prof. Gaspar has performed postgraduate research on body contour treatments and reconstructive and aesthetic medicine, and is among the pioneers in the use of laser treatments for vaginal rejuvenation. He is a member of several eminent medical societies and organizations as well as director of the Argentine Institute of Aesthetic Medicine and Laser Gynoplasty, director of the Chilean College of Reconstructive and Aesthetic Medicine, and associate professor at the Argentine School of Aesthetic Medicine (AICER) in Buenos Aires.

Experts

From a rumor to a successful – and helpful – venture

An interview with Dr. Sabina Sencar, MD, specialist in obstetrics and gynecology **By Romana Pahor**

Where did you first hear about gynecological laser treatments?

Dr. Sencar: I heard a rumor from some of my colleagues that another colleague of ours in Zagreb had started with a new method of gynecological treatment involving laser therapy. At that time this therapy was not available in Europe and no one else in our community had ever seen it, let alone knew the details.

What made you decide to start working with a laser?

Dr. Sencar: We went to Zagreb and saw exactly what Dr. Fistonc was doing there and we were delighted. Once you understand the theory behind the procedure, you really cannot have any argument against the use of this type of therapy.

Was it difficult to use the laser for the first time, and was the treatment procedure difficult to learn?

Dr. Sencar: The basic operation of the laser is simple, but to take advantage of all the laser's capabilities, however, requires a bit more commitment. If you buy the best phone or the best car in the world, it doesn't mean that you will immediately become the best driver or user – it's possible that you may never take full advantage of your

The basic operation of the laser is simple, but to take advantage of all the laser's capabilities, however, requires a bit more commitment.

device's capabilities. Knowing that the laser can also be used as a very powerful knife, I'd be lying if I said that at the beginning I was not a little scared.

Did you have any hesitations about opening one of the first private clinics to offer such treatments in your country?

Dr. Sencar: Was Eliza Doolittle (Pygmalion) still the same street flower seller, when she met and learned new tools of communication, new words? When you start using a new medicine, a more effective method, it is very difficult to change back to the old tool. Considerations about the clinical setting or the room that you will be using to perform the new procedure are a necessary part of this. So the decision was not difficult.

How did you plan for this new venture, and how concerned were you about return on investment?

Dr. Sencar: At the beginning, with the establishment of the new office it was necessary to invest a significant amount of money. With my partner Dr. Urska Bizjak Ogrinc, we acquired a loan and now with our successful work, we are paying it back. We never missed a meal in return and we are not hungry. The price that we set for the procedure was advised by our colleagues, who carefully calculated the cost/investment.

How did you attract patients? Is there any advice that you could give to other clinics starting to promote these treatments?

Dr. Sencar: The most precious thing is a fully satisfied patient. Information from word of mouth is critical in



We use the laser as much as possible and the more we use it, the more we learn and the more we appreciate its capabilities.

the application of new methods of treatment. The truth is that diseases such as incontinence of urine and feces, and vaginal wall laxity are a very stigmatized subject. Women with these problems have never talked to friends or even their doctor, let alone the wider public.

When you start talking about these issues in public, it is like you have lifted a roof which has been hiding countless embarrassments and anxieties. When one finds such a roof, light overcomes the darkness. We are pleased that women have begun to talk to each other about such things. When we realize that we are not the only one with the disease and that we are not alone, we begin to solve the problem.

How many patients have you treated and how long have you been offering this treatment?

Dr. Sencar: In the first year and a half we treated about 200 patients.

Are there any other additional laser treatments that you now offer, and how that has changed your practice?

Dr. Sencar: They say that flavor only comes after you taste the food. We use the laser as much as possible and the more we use it, the more we learn and the more we appreciate its capabilities. The gynecological applications are very diverse: from the treatment of cystocels vaginal atrophy and ext. genitals, perineal repair of scars and caesarean scars, labia corrections, treatment of infec-



Dr. S. Sencar and Dr. U. Bizjak Ogrinc with families

When you start using a new medicine, a more effective method, it is very difficult to change back to the old tool.

tious agents (herpes, HPV), interventions in the cervix, and the list goes on and on. We also use the laser in areas that are not directly connected to gynecology.

Are your patients satisfied with the treatments they receive?

Dr. Sencar: In most cases, patients who have undergone laser therapy are extremely satisfied. An unsatisfied individual is more the exception than the rule. Anyone who works with people knows that it is impossible to satisfy everyone. Otherwise, a happy patient each day convinces us that we have made the right decision. ✱

ABOUT DR. SABINA SENCAR

Dr. Sabina Sencar is the founder of the Juna Clinic in Slovenia, where she applies her specialist medical skills and training to aesthetic and clinical gynecology laser treatments. Dr. Sencar graduated from the Medical Faculty of the Ljubljana University in 1996 and became a resident in General Surgery at the Ljubljana University Medical Center. She joined the Gynecological Clinic of the Ljubljana University Medical Center in 2002, where she practiced gynecology and completed her specialization in Obstetrics and Gynecology in 2008. As a specialist in OB/GYN she continued to work at the Gynecological Clinic of the Ljubljana University Medical Center until 2012, when she founded her own clinic.

Dr. Sabina Sencar helped pioneer the use of the Er:YAG laser for stress urinary incontinence and vaginal relaxation syndrome in Slovenia, and made important contributions to the popularization of these procedures in the broader region. She also published the first Slovenian pilot study on minimally invasive laser therapy for stress urinary incontinence in the Proceedings of the International Medical Laser Association (IMedLA) in 2012.



“The popularity of these procedures has had a very positive effect on our business”

An interview with Dr. Ferit Saracoglu, president of the European Society of the Cosmetic and Reconstructive Gynecology **By Edita Krajnovic**

Dr. Saracoglu, you were one of the first gynecologists in Europe to undertake this pioneering laser research. What made you decide to get involved with laser medicine?

Dr. Saracoglu: Vaginal relaxation results in decreased sexual gratification for women. Although few women openly discuss vagina-related cosmetic issues, no woman wants to age or lose optimal function anywhere, and this includes the vagina and vulvar structures. Many women wonder about how they can enhance the aesthetic look of their vaginas and increase sexual gratification for themselves and their partners. Laser vaginal tightening enhances vaginal muscle tone, strength and control. It also decreases the internal and external vaginal diameters and builds up the perineal body.

Nearly one third of middle age women suffer from stress urinary incontinence in the western world. Usually these women also have genital prolapse and vaginal relaxation. We have performed different kinds of surgeries for such treatments, including invasive and minimally invasive procedures. Although the success rate of the invasive treatments was high, dyspareunia and sexual dysfunction, mesh erosions, infections, and other complications were common after surgery. This is the reason why I began looking for a noninvasive procedure without side effects, and why I became involved in laser vaginal treatments.

Did you receive any support from fellow colleagues and researchers?

Dr. Saracoglu: I was introduced to basic training in laser physics and laser use in medicine from Zdenko Vizintin at the Laser & Health Academy in Slovenia. Prof. Ivan Fistonic from Croatia was also kind enough to share his pioneering experience related to IntimaLase® and IncontiLase® with me. He is very good in this field.

Did you have any prior experience in using a laser?

Dr. Saracoglu: As you know, CO₂ lasers have been used for gynecological indications for a long time. I was trained in CO₂ laser use in laparoscopic and hysteroscopic infertility surgery in Belgium in 1990, but I had no prior experience with the more precise, gentle Er:YAG lasers, which are the types that we use today for IncontiLase and IntimaLase®

IntimaLase® and IncontiLase® are safe, 30 minute, bloodless, outpatient laser surgical procedures. Patients may return to work or to the gym on the same day, and sex can be resumed in a week.

Is it an easy procedure for women, and is there any risk?

Dr. Saracoglu: Most women want to feel young again, increase sexual gratification for themselves and their male partner, and we can accomplish this easily. IntimaLase® and IncontiLase® are safe, 30 minute, bloodless, outpatient laser surgical procedures. They are not painful procedures and there is no need for anesthesia. Patients may return to work or to the gym on the same day, and sex can be resumed in a week. There is no need for any pain medication and there are no risks such as bleeding, infection, hyposensation, hypersensation, scarring, or uncomfortable sex after IntimaLase® and IncontiLase® treatments. There is no need to arrange for someone to take you home and take care of you after the procedure. It's almost like a magical treatment!





Dr. F. Saracoglu (left) with Turkish colleagues

What happens if a woman becomes pregnant again?

Dr. Saracoglu: The treatment has no effect on pregnancy and delivery. Of course after a vaginal delivery the treatment may have to be repeated.

Was it difficult to recruit patients for the study? How did your patients react to the treatment?

Dr. Saracoglu: Usually patients are aware of laser vaginal rejuvenation from the mass media. Therefore it was not very difficult for them to accept IntimaLase®. However, with IncontiLase®, patients wanted more information. Therefore we needed to explain to them what the laser is and how the treatment worked. In the beginning, when we had neither short-term nor long-term experience, it was more difficult to explain the prognosis.

Who are the best candidates for laser vaginal treatment?

Dr. Saracoglu: The best candidate is a physically healthy woman with realistic goals.

What aspects of the research were difficult to overcome?

Dr. Saracoglu: We wanted to monitor the patients at 6 weeks and 6 months after the treatment to see the short-term and long-term results. If the patients felt good, however, they were not eager to return for a check-up. My very persistent secretary called every patient to be sure that they would come. In the check-up, we made perineometric measurements and also used special questionnaires to record developments after the treatment.

The future of laser treatments, especially for stress urinary incontinence, is very bright.

Do you remember your first patient?

Dr. Saracoglu: Yes, you never forget the first one. She was a women aged 36, suffering from stress urinary incontinence. Since she also had incontinence during sex, her self-confidence had significantly decreased. After IncontiLase® she is still dry today. She comes for check-ups regularly and feels very well.

Were you surprised by the results of the study, and what in particular do you feel stood out?

Dr. Saracoglu: Theoretically I was expecting that the result would be good for IncontiLase® for the treatment of involuntary loss of urine, especially with laughing, coughing, sneezing, exercising, etc. However, when we did the statistics we saw that it was better than we expected. The IntimaLase® procedure is used for tightening of vaginal canal. There were previous reports by Dr. David Matlock from the US, who is using a diode laser for a laser vaginal tightening procedures for enhancement of sexual gratification. We believed that we would get better results with the Er:YAG laser treatment for vaginal tightening, which enhances vaginal muscle tone, strength and control. So I can say that we were not surprised by the results – in fact we had expected superior results because there is a lot of scientific data supporting the efficacy of Er:YAG laser treatments.

In addition to IntimaLase® and IncontiLase®, which other procedures do you perform in your practice?

Dr. Saracoglu: As a women's cosmetic surgeon, I also perform other laser cosmetic procedures, including dermal laser surgery and genital surgeries such as sculpting the small inner lips; rejuvenating the relaxed or aging perineum; enhancing the labia by transplanting the patient's own fat; removing unwanted fat; or reconstructing the hymen, liposuction, and abdominoplasty.

Do you enjoy lecturing and training other gynecologists in the field of laser gynecology?

Dr. Saracoglu: As a member of the International Society of Cosmetogynecology, the American Academy of Cosmetic Gynecology and currently the president of the European Society of the Cosmetic and Reconstructive Gynecology, I regularly attend the meetings of these societies and give lectures about cosmetic and laser genital surgery in Europe and the States. There is also great interest in IntimaLase® and IncontiLase® among Russian gynecologists. I have been invited to give lectures in Russia twice in the last 6 months, and two Russian gynecology professors will soon come to my clinic for training. I have also trained several gynecologists in my home country because so many women want and need help in this area.

How has your research helped you in your career and business?

Dr. Saracoglu: Laser vaginal rejuvenation is the most common female genital plastic surgery procedure. Patients who suffer from stress urinary incontinence can also have this condition treated at the same time. In the U.S. more than 2500 women aged between 19 and 50 years opted for vaginal rejuvenation in 2009 and its popularity is increasing. After I began laser vaginal treatments, the number of my patients asking for IntimaLase® and IncontiLase® dramatically increased.

We have 17 centers performing laser vaginal treatments in Turkey. Since IncontiLase® and IntimaLase® are office procedures without pain or anesthesia, they are more economical for patients than the diode laser treatments that require hospitalization and anesthesia. The popularity of these procedures has had a very positive effect on our business. And the treatment is gaining its popularity in other countries, too. I have patients of different ages but many of them are in their 30s to 40s. I can say that the future of laser treatments, especially for stress urinary incontinence, is very bright. ✱

ABOUT DR. FERIT SARACOGLU

Dr. Saracoglu graduated from the Hacettepe University Faculty of Medicine in Ankara, Turkey in 1981 and performed his residency training in obstetrics and gynecology at the Karadeniz Technical University, Faculty of Medicine in Ankara. Between 1995 and 2012 he worked as the chief of the Department of Obstetrics and Gynecology at the Ankara Numune Training and Research Hospital. Dr. Saracoglu is the first President of ESCORG (European Society of Cosmetic and Reconstructive Gynecology). Among other qualifications, he has been certified as a high-risk pregnancy specialist, a gynecological cancer surgery specialist, a reproductive medicine and infertility specialist and a laser surgery specialist, having received training in advanced laparoscopic cancer surgery in the United States. His scientific papers have been in more than 150 domestic and foreign journals in Turkish and English.

“Number one on my list of treatment options!”

An Interview with Dr. Jorge Gaviria, specialist in obstetrics, gynecology and human reproduction **By Marusa Bertoncelj**

What are the key advantages that laser technology has brought to your practice?

Dr. Gaviria: There are two main benefits that the technology has brought to my practice. In the first place it has allowed me to have sustained growth, since many patients really search for better treatments and the technologies that can provide them. Secondly, it has also created exceptionally high patient loyalty and a high rate of referrals.

What do you consider are the main characteristics that a laser must meet in order to be useful in a gynecological practice?

Dr. Gaviria: I've had several types of lasers in my practice and from my experience I can say that the most distinctive characteristics are effectiveness, cost efficiency and a wide spectrum of applications. It needs to excel at the treatments it was intended to perform, with a high rate of success. Consumables and cost of maintenance have to be in line with what the laser can produce. And, since in Latin-America our per-procedure fees are relatively low compared to other countries, it is important to optimize the use of the laser system. So it is very helpful when a broad spectrum of treatments can be performed with the same laser platform.

What advice would you give to a professional who is considering the possibility of incorporating laser technology into his or her practice?

Dr. Gaviria: In a competitive sales environment, not all laser suppliers provide all the valuable information needed to make the right decision, so it can sometimes be misleading or confusing. Workshops represent a great opportunity to expose yourself to live usage of these technologies for a better understanding of how things really work, so invest time to obtain hands-on experience. Also, as gynecologists we generally have very little education on how to evaluate return on investments. It's

important that you create a simple chart in which you can estimate the amount of revenue received from treatments versus the cost associated with the purchase of a system and its maintenance.

Once a practitioner has decided to start a laser practice, what should the focus be on?

Dr. Gaviria: First of all, master your tool. You don't need to become an expert in laser physics, but you need to put the time and effort into the education that will provide you with the proper understanding of what your laser can do and what are its limitations are. Second, make sure that your current patient base receives notification of the new or improved treatments that your new technology can perform. Involve all of your staff in communicating this information so that every person that enters the practice can be aware of what you offer. Finally, ensure that your laser procedures are affordable to your patients so that most of them can benefit from its treatments and thereby allow many more new potential patients to find out about it.

ABOUT DR. JORGE GAVIRIA

Dr. Gaviria graduated as a Surgeon from De Los Andes University in Venezuela in 2001 and undertook his specialization in gynecology and obstetrics at the Venezuelan Red Cross in 2008. He also received a Female Intimate Aesthetics diploma in Buenos Aires, Argentina in 2009, a diploma in Cosmetogynecology in 2012, and is a Laser Graduate of the University of Carabobo, Caracas in 2012. He is currently a leading gynecologist at the University Hospital of Caracas (HUC-UCV) and a cosmetogynecologist at the Aldana Laser Center in Caracas.

There are two main benefits that the technology has brought to my practice: sustained growth and exceptionally high patient loyalty and a high rate of referrals.

What do patients rate as the highest benefit of the Fotona SMOOTH mode procedures you perform?

Dr. Gaviria: You can tell during the initial consultation that they are very pleasantly surprised to discover that we can offer non-invasive treatments. Most patients decline or postpone a treatment decision when they are offered a surgical option due to its inherent risks, potential pain and the inability to return immediately to their normal lives. Many also find it very important that as ambulatory procedures these treatments are much more affordable than the alternative of going to a surgical environment.

How do you see the integration of (non-gynecological) aesthetic laser treatments in the gynecological practice?

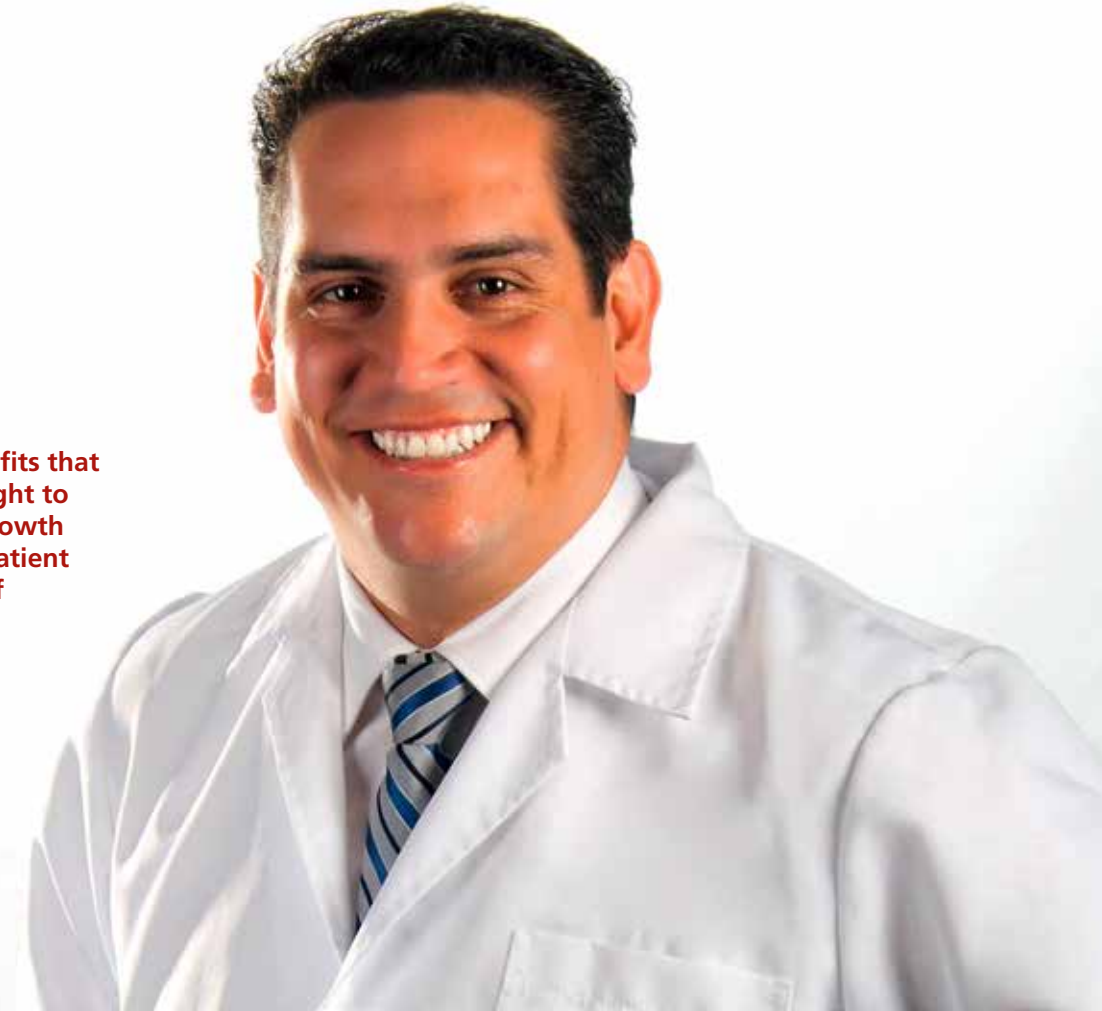
Dr. Gaviria: From my experience, close to half of all gynecologists in my region are interested in bringing these procedures to their practice. It is clear that we have a large captive female population in our practice and we have learned that women are very inclined to consume a wide variety of aesthetic protocols. It is very important

I have experienced this with several types of lasers and by far the FotonaSmooth system was the most simple and provided the shortest time to master.

ant to define an adequate plan of implementation of a multi-specialty practice. Incorporating a specialist that will manage these patients or developing the adequate education needed to perform these treatments are both viable approaches. Focusing on the non-invasive aesthetic treatments that the FotonaSmooth system provides will be the fastest and safest way to get started.

Was it difficult to use the laser for the first time?

Dr. Gaviria: Not all lasers have the same learning curve. I have experienced this with several types of lasers and by far the FotonaSmooth system was the most simple and provided the shortest time to master. It was also the only one in which my mistakes created no damage to the patient. This provided me with full confidence in its use and has placed it as #1 on my list of treatment options. ✱



Experts

Vaginal Erbium Laser is Effective, Safe and Discreet

An interview with Prof. Marco Gambacciani, Director of the Menopause Center at Pisa University Hospital **By Matjaz Kljajic**

You have been working as a gynecologist since 1982. Can you tell us more about yourself and your work?

Prof. Gambacciani: Yes, in 1982 I completed my Residency in OB/GYN. Then I joined the University of California in San Diego where I had my Fellowship in Reproductive Endocrinology. Since 1987 I have been the Director of the Menopause Center at the Pisa University Hospital. Thanks to the work of my brilliant co-workers and assistants, we completed many clinical trials and attended to women with general health issues and reproductive disorders. I actively organized and participated in Seminars and Congresses around the world, lecturing on menopause related issues. We have also been educating women on practices to detect abnormalities and promote health and quality of life. Personally, I have performed thousands of surgical interventions for the treatment of gynecological conditions. This was possible also due to my experience and fellowship in Ljubljana, where I met outstanding clinicians and surgeons such as Prof. Rakar and Adolf Lukanovic. I had wonderful times in Slovenia. After meeting the Fotona team, I can now really tell that working with Slovenian scientists and researchers was a part of my professional destiny!

Do you remember how Erbium laser gynecology procedures were first introduced to you?

Prof. Gambacciani: A close friend of mine stepped into my office and said “What do you think about laser for the treatment of gyny disorders?” and I said “Nothing, I don’t know anything about it”. This was the beginning of a period of intense study. I focused my attention on different lasers and different techniques. I was in Zagreb visiting another old friend, Dr. Ivan Fistonc, who showed me how to perform laser procedures. An Italian friend, Genesio Grassiri, is also the Fotona Distrib-

After meeting the Fotona team, I can now really tell that working with Slovenian scientists and researchers was a part of my professional destiny!

utor in Italy. We established the Vaginal Erbium Laser (VEL®) Academy, which now lists 22 clinicians in Italy. It’s a growing clinical and academic experience.

Which gynecological laser procedures do you perform most often?

Prof. Gambacciani: I can say that one of the most performed procedures is RenovaLase® for vulvo-vaginal atrophy, but in more than 50% of postmenopausal women we use Inconti-Lase® to treat the atrophy along with the urinary incontinence - often the hidden disruptor of female quality of life. We know that urinary incontinence is underreported, under diagnosed, and therefore undertreated worldwide. Vaginal erbium laser can be an excellent option for these women.

In your opinion, what is the advantage of laser procedures over the existing treatment options?

Prof. Gambacciani: The advantages are many: Vaginal erbium laser is effective, safe and discreet. It does not alter sexual relationships as gels, creams and vaginal suppositories. And also the costs are comparable with the rather expensive drugs and remedies proposed for vaginal atrophy. Often the over-the-counter remedies are even more expensive than the prescription drugs.

What kind of gynecological laser procedures are closest to your heart?

Prof. Gambacciani: Treating any kind of patient is rewarding. However, recently I have been treating dozens of postmenopausal women surviving breast cancer. As you know, in these patients we cannot use estrogen therapies. In these cases the vaginal atrophy is often really severe, even in women in their late thirties or early forties, preventing sexual relations. Their quality of life can be significantly improved by vaginal erbium laser treatments. A breast-cancer patient of mine, after the laser procedure, was able to have her first intercourse in 7 years. And she is only 38 years old!



ABOUT PROF. MARCO GAMBACCIANI

Prof. Marco Gambacciani graduated in 1978 from the University of Pisa and finished his residency in Obstetrics and Gynecology in 1982. He then attended the University of California in San Diego where he undertook his Fellowship in Reproductive Endocrinology.

Since 1987 Prof. Gambacciani has been a Professor of Obstetrics and Gynecology and the Director of the Menopause Center at the Santa Chiara University Hospital's Department of Reproductive Medicine in Pisa, Italy. He has also been a member of the medical advisory board at Bionovo, Inc. since 2010.

Prof. Gambacciani has served as a member of the Executive Committee of the International Menopause Society and is a member of the Executive Committee of the European Menopause and Andropause Society, as well as being a member of other professional societies. He has authored more than 120 papers in peer-reviewed international journals.

You have been very involved with scientific research in this field. Where have you published your data and what has surprised you the most about your results?

Prof. Gambacciani: I am definitely enthusiastic about the laser’s effects on atrophy! But also the effects on urinary incontinence are really surprising. I have records of women who were already scheduled for surgery, but after the laser treatment they decided to cancel the surgical procedure. This is a very convincing experience for a clinician and surgeon like myself, used to perform surgery for urinary incontinence.

Are you planning more future publications, and how many patients will you publish data on?

Prof. Gambacciani: I recently submitted a paper in a peer-reviewed journal about our experience on vaginal atrophy in breast cancer survivors. We are also preparing manuscripts on sexuality after vaginal laser treatment and on long-term effects in more than 150 postmenopausal women. In addition, the Italian Academy has a database of more than 600 patients, which is a gold mine for future publications. ✱

Urinary incontinence is underreported, under diagnosed, and therefore undertreated worldwide. Vaginal erbium laser can be an excellent option for these women.



Experts

A Unique Therapy with a Great Future

An interview with Prof. Barry O'Reilly, head of the Department of Urogynecology and Pelvic Floor Reconstructive Surgery at Cork University Maternity Hospital in Ireland **By Sasa Gnezda**

You have extensive experience as a gynecologist. What has convinced you to try Erbium laser therapy to address your patients' problems?

Prof. O'Reilly: As a fellowship-trained urogynecologist and head of the department of urogynecology and pelvic floor reconstructive surgery at Cork University Maternity Hospital in Ireland, I was intrigued by the concept of transvaginal laser treatment for urogynecological conditions that had previously required surgical correction. I was aware of the use of CO₂ lasers in urogenital atrophy but had concerns regarding the highly ablative nature of this form of laser therapy and so I chose to use the erbium option. It is extremely timely that we now have an option to treat stress urinary incontinence, vaginal laxity and urogenital atrophy in the office setting.

What kind of gynecological laser treatments have you introduced to your practice?

Prof. O'Reilly: I started using IncontiLase® in 2015 and am leading a major European multi-center placebo controlled randomized trial, which is recruiting at a fast pace. I have recently commenced IntimaLase® and RenovaLase® treatments. I hope to set up a similar placebo-controlled randomized trial for RenovaLase® in the coming months, and I think this is a very exciting therapeutic option in the future as we are now seeing a huge increase in morbidities associated with urogenital atrophy, in particular recurrent cystitis with its resulting economic burden, and also patients have been dependent on long-term prophylactic antibiotics.

Despite reassurances about stress incontinence surgery, many patients are keen to look at newer options like transvaginal laser therapy.

I think we have reached a very exciting time in gynecological surgery with the use of transvaginal laser therapy.

Are your patients generally satisfied with the treatment?

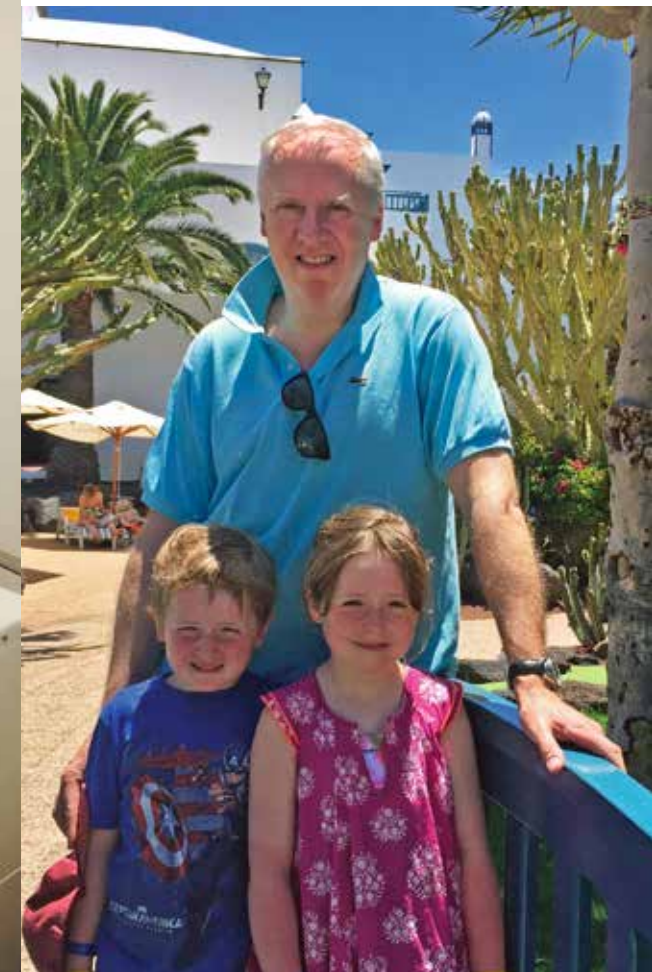
Prof. O'Reilly: My patients have been very happy with the idea of an office-based solution for stress urinary incontinence. In particular, it is an ideal option for young women who have not yet completed their family and for women with young children who are not yet mobile (both groups that would not be appropriate for mid-urethral sling surgery). It has also proven to be an ideal option for women who cannot take time off from work as well as for those who have concerns related to the use of mesh in stress incontinence surgery. Our patients are very aware of the international concerns that have been raised with regard to transvaginal mesh, and despite reassurances about stress incontinence surgery, many are keen to look at newer options like transvaginal laser therapy.

How do you reach out to patients?

Prof. O'Reilly: I have written some articles for national media and hope to run a series of patient information evenings. My website requires updating and I am keen to explore the options of social media in the near future.

What do you think about the future of lasers in gynecology?

Prof. O'Reilly: I think we have reached a very exciting time in gynecological surgery with the use of transvaginal laser therapy. This is a unique therapy with a great future and it is important that gynecologists and urogynecologists embrace the future. ✱



ABOUT PROF. BARRY O'REILLY

Barry O'Reilly graduated from the Royal College of Surgeons in Ireland in 1991 and continued his training as a Research Fellow in Urogynaecology at Guy's and St. Thomas' Hospitals at Kings College London from 1998–2000. After finishing his specialty training he served as a Fellow in Urogynaecology and Pelvic Surgery at Mercy & Royal Women's Hospital in Melbourne, Australia from 2002–2004, where he was appointed as a Consultant in Obstetrics and Gynaecology.

Prof. O'Reilly is currently an Associate Professor, UCD Consultant in Obstetrics/Gynaecology, and Subspecialist in Urogynaecology at Cork University Maternity Hospital in Cork, Ireland. He is considered a European expert in robotic pelvic floor reconstructive surgery, having established CUMH as the foremost Epicentre for robotic gynaecological surgery in Europe.

Prof. O'Reilly is a member of the Royal College of Obstetricians and Gynaecologists, the British and Irish association of Gynaecological Robotic surgeons (elected committee member), the Continence Foundation of Ireland (founding Chairman 2005–2009), the Institute of Obstetrics and Gynaecology of Ireland (executive board member), the European Urogynaecology Association (Executive Board and Treasurer since 2015), as well as other associations.

Experts

“The More this Technique is Known, the Greater will be the Demand”

An interview with Prof. Santiago Palacios, OB/GYN specialist and director of Instituto Palacios – a medical center dedicated to the promotion of health, healthy ageing and the prevention and treatment of women’s diseases **By Anisa Faganelj**

It is well known that a great percentage of women experience atrophy and stress urinary incontinence in their lifetime. In your opinion, are these conditions connected with a social stigma that can make sufferers hide their illness? What is the role of the gynecologist in breaking the taboos?

Prof. Palacios: The current options for preventing and treating these conditions are clear and effective, and gynecologists are responsible for this area of health. Women routinely turn up for checkups, especially for Pap smear screening or mammography, and certainly many of them consult for menopause-related symptoms. Here gynecologists have a magnificent opportunity to explain the possibilities, as it is our job to care for the health of the genitourinary area.

You asked about the taboos that exist – there are still many of them, and our role is also essential in providing information. An example is that women think that all of the genitourinary symptoms are inevitable and related to their age, and have no solution unless with dangerous hormones. Of course, a good explanation concerning hormonal and non-hormonal preventive and therapeutic options, as well as explaining the efficacy and safety, are essential.

Laser treatment is a new therapeutic tool that provides many new and promising possibilities and opens up other opportunities for improving the sexual life for millions of women.

You mentioned many women consult their gynecologist for menopause-related symptoms (known as genitourinary syndrome of menopause). There are different treatment options available. Where, in your opinion, is the place for laser treatments?

Prof. Palacios: The genitourinary syndrome of menopause, caused by estrogen deficiency, is responsible for the appearance of symptoms affecting quality of life, such as vaginal dryness and/or dyspareunia or urinary symptoms, and affects at least 40% of postmenopausal women.

Treatment will aim to restore the urogenital epithelium and relieve symptoms. For symptoms such as vaginal dryness, dyspareunia or other symptoms associated with this syndrome, the first line of treatment is moisturizers and vaginal lubricants. If they do not provide adequate improvement of symptoms or if moderate to severe symptoms continue, estrogens are used.

Estrogens are, until now, the most effective treatments. In cases of vaginal atrophy, the choice is local estrogen therapy. In cases coexistent with vasomotor symptoms affecting quality of life, the choice is systemic hormonal therapy or the combination of BZE/CEE (bazedoxifene/conjugated equine estrogen). Local estrogenic or systemic treatments can be combined with moisturizers and lubricants.

New therapeutic alternatives such as ospemifene have recently appeared. Ospemifene is a SERM (selective estrogen receptor modulator) that selectively exerts agonist effects on the vaginal tissue. It is the first non-hormonal oral alternative for vulvovaginal atrophy or the genitourinary syndrome of menopause.





ABOUT PROF. SANTIAGO PALACIOS

Prof. Santiago Palacios graduated from the Complutense University of Madrid in 1979, after which he began his career as a doctor in the Jimenez Diaz Foundation in Madrid. He then specialized in Obstetrics and Gynecology and in 1982 obtained the title of Doctor "Cum Laude". In 1989 he founded the first menopause unit at the Jimenez Diaz Foundation in Madrid.

Prof. Palacios is Editor-in-chief of Revista Iberoamericana de Revisiones en Contracepción y Menopausi and a member of the editorial board of Maturitas, Climateric, BMC Women's Health, Menopause Internacional, and Evidence-Based Medicine (Spanish edition). He is a founding member of the European Menopause Society and a member of the Spanish Association for the Study of Menopause (AEEM) among other organizations. He has authored more than 300 journal articles, abstracts and books on women's health and he has been the principal investigator in more than 50 clinical trials. He is also a frequent speaker at national and international conferences and has participated in more than 600 presentations.

Finally, vaginal laser is emerging as another option for non-invasive treatment of genitourinary syndrome of menopause. The laser can treat vulvovaginal atrophy with the same effectiveness as estrogens for vaginal atrophy and even greater with vulvar atrophy. We can also treat urinary stress incontinence, and additionally (and that is specific only with vaginal laser) we can treat both disorders, which often coexist at the same time.

What is the impact of laser treatment on a patient's quality of life?

Prof. Palacios: Laser treatment for vulvovaginal functional pathology is a new therapeutic tool that provides many new and promising possibilities and opens up other opportunities for improving the sexual life and quality of life for millions of women.

The vaginal erbium laser treatment is a highly safe procedure for patients if applied with the appropriate parameters, and should not have collateral or adverse effects. Any author who has used the vaginal erbium laser in gynecology has not reported any serious adverse effects that would discourage its use. On the contrary, all results and expectations are positive.

Do patients come for laser treatment specifically? Where do they hear about the treatment?

Prof. Palacios: Indeed, now I can say yes. We noticed that word of mouth is having an effect. In fact, this last week we had two patients with vaginal atrophy, and the laser was specifically requested because a friend who did the treatment with us spoke very well about the laser and the rapidity of the results. Of course, this does

Any author who has used the vaginal erbium laser in gynecology has not reported any serious adverse effects. On the contrary, all results and expectations are positive.

not rule out that we must individualize each case and determine the precise indication, but actually, I'm sure that the more this technique is known, the greater the demand will be.

How important is patient education in the promotion of laser gynecology treatments?

Prof. Palacios: This is an interesting question and it makes me think about the need for educating patients about laser applications for all of these conditions in gynecology. For example, many of our patients think it is too sophisticated, others think it will cause them pain, while others think that its effectiveness has not been proven yet. I think that it is very important to explain the technique and how it works in detail. In fact, this is the approach that we use to help the patient accept the treatment.

Some concepts are fundamental for understanding and accepting laser treatment. For example, concepts such as the replacement of the old collagen by new collagen fibers. These fibers are histologically more compact and better organized, giving a fabric-like texture and more tension, achieving a better organized cellular matrix, inducing neocollagenesis and increasing and improving vascularization.

Do you provide training to other doctors in Spain?

Prof. Palacios: Yes, I've done two theoretical and practical courses for a small group of 15 to 20 colleagues. In principle it is a one-day training. In the morning we show 3 case studies, one of stress urinary incontinence, one of vulvovaginal atrophy and another of vaginal hyperlaxity syndrome with live questions. The truth is that these courses are very successful. In the afternoon, we review the laser technique, laser types, benefits and risks of each. We also discuss the results and studies that have been published, and finally we talk about our experience at the Palacios Institute.

Are you satisfied with the results of the treatments?

Prof. Palacios: Very much. Actually, not only myself, but the entire team of gynecologists who perform the treatments at my Institute. ✱



Experts

“Our Practice has Grown Significantly”

An interview with Prof. Acs Nandor, Head of the OB/GYN Department of the Faculty of Medicine at Semmelweis University and a Laser and Health Academy (LA&HA) lecturer **By Sasa Gnezda**

How did you come to hear about Fotona's gynecology applications?

Prof. Nandor: The first time I learned about Fotona's gynecological applications was several years ago at an international menopause congress. At first I was surprised by the idea of treating vaginal atrophy using a laser system. To tell you the truth I did not believe in it at all. Then I met the Fotona staff at a meeting in the Gemelli Hospital in Rome and they convinced me to do a trial. That was the beginning of the story. As of now we have been working with our Fotona system for a year and we have treated approximately 100 patients.

Are the patients satisfied with the results and do they recommend the treatment by word of mouth to others?

Prof. Nandor: Yes, most of our patients are very satisfied with the treatment. I think we are at the stage when word of mouth recommendations begin to work. One of my favorite stories was when a young female surgeon brought her grandma to us because a patient of hers had been successfully treated at our clinic and told her story to her doctor.

Which treatments do you currently perform?

Prof. Nandor: The most common procedures performed by us are IncontiLase® (SUI), IntimaLase® (Vaginal

A young surgeon brought her grandma to us because a patient of hers had been successfully treated at our clinic and told her story to her doctor.

Relaxation) and RenovaLase® (genitourinary syndrome of menopause). All the procedures have been very successful.

Has your practice been growing due to laser treatments?

Prof. Nandor: Yes, our practice has grown significantly since we launched this new clinic in Budapest. A lot of patients come to us seeking help for their problems and we are very pleased that we can be of service to them. ✱

ABOUT PROF. ACS NANDOR

Nandor Acs graduated from Semmelweis University Medical School in Budapest, Hungary in 1992. He is an OB/GYN specialist with board examination in obstetrics and gynecology, general surgery and clinical pharmacology. He is full professor and Head of the OB/GYN Department of the Faculty of Medicine at Semmelweis University, as well as Medical Director at the Femmed Institute for aesthetic gynecology in Budapest. He specializes in menopausal medicine and pelvic organ prolapse surgery.

Prof. Acs also holds a Ph.D. degree and an MBA in health economics. He has organized several national and international congresses and teaching courses, and has published more than 300 papers with around 1000 citations. He is a member of several eminent medical societies and organizations.



Experts

Erbium Laser Gynecology: a New Era of Women's Health

An interview with Dr. Jennifer Poning Lee, Director of the Beijing International Medical Center, Sexual Rejuvenation & Regenerative Center **By Zala Kerle**

Obstetrics and gynecology is a vast field offering clinicians the opportunity to care for a dynamic population of females. During your professional career, have you been focused on any specific condition?

Dr. Poning Lee: I had been working as a gynecologist especially focused on infertility and laparoscopy for more than 15 years. In recent years, I have added vaginal rejuvenation and regenerative therapies into my clinical practice, setting up a pioneering new field in Asia. I was pleasantly surprised to find that these vaginal laser therapies have successfully rescued my patients from annoying symptoms such as vaginal relaxation syndrome and stress urinary incontinence. Actually, among all the traditional treatments it's really difficult to improve a patient's sexual quality back to its youthful stage by hormone therapy or biofeedback treatment when they suffer from vaginal relaxation after birth or atrophic vaginitis after menopause. So the Erbium laser gynecological procedures have really opened a new era of women's health.

Can you tell us more about your experiences with erbium gynecological laser treatments?

Dr. Poning Lee: The Erbium laser gynecological procedures were first introduced to me by the Fotona sales manager in Taiwan in early 2013. Before that, my vaginal rejuvenation therapy was mainly focused on cosmetic surgeries. After I reviewed the clinical papers, I decided

I decided to try the IntimaLase® and IncontiLase® procedures on myself. One month after the first treatment, I felt a lot of improvement in my own condition.

to try the IntimaLase® and IncontiLase® procedures on myself. One month after the first treatment, I felt a lot of improvement in my own condition. So we purchased the first Erbium Laser for our aesthetic medical group two months after my first treatment. Since then, we have already set up three main leadership vaginal rejuvenation centers in Taiwan and two in Beijing, China. For 2016, my team plans to set up six to eight more of these kinds of leadership vaginal rejuvenation centers in the whole of China. I will be cooperating with the Fotona distributor in China to train more doctors to apply the Erbium vaginal laser in clinical fields as I had learned previously.

How long have you been working with erbium gynecological laser and how many patients have you treated?

Dr. Poning Lee: Since early 2013, I have treated more than 500 patients in Taiwan and China. And I have been a consultant and instructor for teaching the clinical use and marketing of vaginal rejuvenation for more than two years. I also travelled to over 15 major cities in China to give professional lectures related to vaginal laser. I use the laser to treat clients for vaginal relaxation syndrome, stress urinary incontinence and vulva skin rejuvenation. Recently we further used it to treat birth stretch marks, with really nice results. Among all those cases, I performed vaginal relaxation syndrome tightening (IntimaLase®) most often, and from autumn 2015 we have combined our treatments with the use of a pelvimetry measurement machine, which has been developed by our own R&D team to evaluate the real vaginal pressure before and after each treatment. We used the measuring data to help with consulting our clients and found out that they were highly satisfied by our treatments and consulting.



Throughout the period of time I have used vaginal laser rejuvenation therapy, I have witnessed many patients repair the relationships with their partners after receiving the IntimaLase® procedure.

So after we had started to do the real vaginal pressure measurement for IntimaLase® clients, I collected some of the data and made it into a clinical study of the patients who received the Erbium laser IntimaLase® procedure. We measured their vaginal pressure before and after each treatment. The results have been published in the lectures of aesthetic laser conferences in Taiwan and Shanghai. The data further helped doctors to understand the real effects of the vaginal laser on vaginal relaxation syndrome based on scientific evidence.

The standards of beauty have changed, and even intimate parts now need to be up to certain aesthetic standards. Have you experienced increasing demand for aesthetic gynecological procedures in your clinic?

Dr. Poning Lee: The beauty of intimate parts has played an increasingly important role in the field of vaginal rejuvenation. I set up three major goals of vaginal rejuvenation: the first is tightness, the second is beauty and the third is pleasure (orgasm). The intimate parts have already been treated as another “face” in Asian women’s hearts, and the chief demand when they first come to see me has often been on the cosmetic concern of “the secret face”. So I often used the Erbium laser to rejuvenate the vulva skin after cosmetic gynecological surgeries, and the patients were really satisfied with the improved shape, symmetry, texture and also the color of the intimate parts, which are four important factors of cosmetic beauty.

Which types of gynecological laser procedures are of greatest importance to you?

Dr. Poning Lee: IntimaLase® has opened another window in my brain for helping my patients who were bothered by sexual dissatisfaction due to vaginal relaxation syndrome. Before the vaginal laser was invented, those women suffered both from clinical symptoms, such as loss of sexual sensation due to vaginal loosening, as well as from a relationship crisis. Throughout the period of time I have used vaginal laser rejuvenation therapy, I have witnessed many patients repair the relationships with their partners after receiving the IntimaLase® procedure. These invisible but precious rewards keep me passionate about continuously devoting myself to this field to create more wonderful harmonic sexual relationships between couples. ❀



ABOUT DR. JENNIFER PONING LEE

Dr. Jennifer Poning Lee graduated from Kaohsiung Medical University in Taiwan in 1999. After becoming a Taiwan board Obstetrician & Gynecologist, she served as Director of the Obstetrics and Gynecology Department at the Ministry of Health and Welfare’s Pingtung Hospital from 2010 to 2013. Since then, she has also specialized as an aesthetic surgeon for vaginal rejuvenation and a cosmetic physician. In 2014 she became the Director of the Vaginal Rejuvenation & Regenerative Centers at the Vigor medical group and the An Her Women and Children’s Hospital.

Since 2015, Dr. Poning Lee has served as the Director of Beijing International Medical Center, Sexual rejuvenation & regenerative Center, as well as Vice President of the Asia-Pacific Association of Anti-aging and Health Management (AAAHM). She is an Associate of the Laser Vaginal Rejuvenation Institute of America, as well as a member of the American Association of Aesthetic Medicine and Surgery (AAAMS). Dr. Poning Lee is an Authorized instructor for Fotona vaginal laser treatments in Greater China & Taiwan.

Laser System for High Performance and Everyday Use

An interview with Dr. Oscar Fernando Bauer Juarez, Specialist in Gynecology and Obstetrics in Guatemala City, Guatemala **By Matjaz Kljajic**

What motivated you to incorporate laser technology in your clinic?

Dr. Bauer Juarez: I have always considered myself to be an enterprising and innovative professional. More than 25 years ago I introduced to my country the first procedures using operative laparoscopy, and since then also the first fetal monitor for twin pregnancies as well as the technologies of bone densitometry, video-colposcopy, and LEEP radiosurgery. And now, after observing the results with the Erbium laser from Fotona, I was particularly impressed by its benefits and decided to also incorporate this type of laser into my practice.

How were your first experiences with this equipment?

Dr. Bauer Juarez: I had the great pleasure to meet and learn the teachings of Dr. Adrian Gaspar, and had high expectations because this laser system can perform a number of procedures for common gynecological diseases in our patients, transforming it into a system for everyday use and high performance. The results obtained so far have been really fascinating, with the added benefit of not having any complications.

What kind of protocols have been used and results obtained?

Dr. Bauer Juarez: The protocols I use are those which have already been used in previous studies by Prof. Gaspar, Gaviria and others, on which basis the results have

In less than 1 hour the patients can go home with their uterine prolapses reduced by 75% and mostly continent.

I feel obliged to extend and share my knowledge with all professional entrepreneurs in my country if they wish, like me, to offer high quality service to their patients.

been very effective. We made some small changes to the protocol in terms of both energy and duration for patients whose defects were more severe.

The results consisted of total or partial reduction of pelvic laxity, with cystocele and/or rectocele improvement above 95%, either because the defect had been annulled or improved in a timely, complete or partial manner; over 94% improvement of mild-to-severe stress and mixed urinary incontinence, and maximized vaginal turgor with increased libido in sexually active women.

Significantly, we have had patients of advanced age (over 80 years) and high surgical risk (with problems of hypertension, DM) who have showed total acceptance, because in less than 1 hour the patients can go home with their uterine prolapses reduced by 75% and mostly continent. We have maintained rigorous photographic monitoring of our cases, which supports the exceptional results.

What future do you see for this technology in your country?

Dr. Bauer Juarez: I feel very lucky to have had professional training of the highest quality that has allowed me to offer great benefits to my patients. As a pioneer of these techniques I feel obliged to extend and share this knowledge with all professional entrepreneurs in my country if they wish, like me, to offer high quality service to their patients, offering safe, fast and noninvasive procedures that raise the standard of gynecological care. ✱



ABOUT DR. OSCAR FERNANDO BAUER JUAREZ

After graduating as an obstetrician-gynecologist, Dr. Juarez completed his fellowship at Baylor College of Medicine in Houston, Texas, USA in 1993. He served as the Associate Head of the Department of Gynecology at Roosevelt Hospital in Guatemala from 1994 to 1996. Since 2008 he has served as a medical officer for the United Nations based in New York, as well as for the Pan American Health Organization (PAHO) in Guatemala, and the World Health Organization, UNICEF and UNDP.



In-depth

The safest, quickest and easiest procedure for vaginal relaxation syndrome

By Jorge E. Gaviria P, Jose A. Lanz L.

Vaginal Relaxation Syndrome (VRS) is a quite common medical condition described as a loss of the optimal vaginal structure and is usually associated with vaginal child delivery and natural aging. Multiple pregnancies and deliveries contribute to a worsening of the VSR condition, as well as the onset of menopause, which causes a decline in hormone levels and vaginal atrophy. Most women (and their husbands or partners) refer to vaginal relaxation syndrome as “loose vagina”, complaining of a loss of vaginal tightness, which is directly related to the reduction of friction during intercourse and thus to a decrease or loss of sexual gratification.

There is a large spectrum of various VRS treatment options on the market ranging from behavioral (Kegel exercises) through pharmacological therapies (hormonal, tightening creams and sprays) to various more-or-less invasive surgical procedures. While behavioral and pharmacological therapies are noninvasive and safe, they have limited efficacy. On the other hand, various surgical procedures promise a much better final result at the price of higher associated risks.

Surgical procedures require the cutting and rearrangement of vaginal and peripheral tissue in order to reduce the size of the vaginal canal. Operating on or near sensitive vaginal tissue is inherently risky and can cause scarring, nerve damage and decreased sensation. Furthermore, patients require an extended recovery period.

The most popular among the surgical procedures are those performed with lasers, where the laser is used instead of scalpel. However it is still a relatively aggressive surgery with a long and painful recovery period.

There are also several novel therapies on the market, among which is IntimaLase - a minimally-invasive, non-ablative Er:YAG laser vaginal tightening procedure utilizing photothermal laser-mucosa tissue interaction. Precisely controlled VSP laser energy pulses delivered to the vaginal canal and introitus area cause heating of the tissue and collagen within. Heating of collagen causes its immediate contraction, fibers become shorter and thicker and consequently the irradiated tissue contracts and shrinks. At the end of the processes of collagen remodeling and neocollagenesis, the treated tissue becomes enriched with new collagen, appearing younger, tighter and more elastic, thus improving vaginal laxity and reducing the effects of vaginal relaxation syndrome.

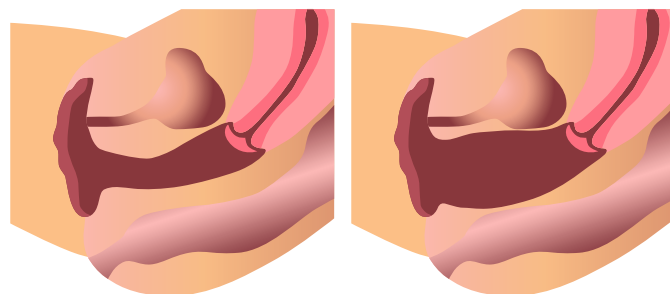


Fig. 1: Vaginal relaxation syndrome; tight vs. expanded (relaxed) vagina

Pilot study procedure: irradiation of the vaginal canal, introitus and vestibule

A pilot study was conducted on 21 patients who received the novel laser treatment (IntimaLase®) for vaginal tightening with a 2940 nm Er:YAG laser between June 2011 and January 2012. All patients received two treatment sessions with an interval between sessions of 15 to 30 days. In a non-ablative, thermal-only mode, laser energies of approx. 90 J per treated area in the vaginal canal and of approx. 10 J per treated area at the vestibule and introitus were delivered to the patient's vaginal mucosa.

A special Laser Vaginal Tightening (LVT) questionnaire was designed for assessing the improvement of vaginal tightness via patient self evaluation and by their sexual partner's assessment. POP-Q measurements were also performed prior to both treatment sessions in an attempt to objectively assess the change in vaginal tissue structure. Additionally, a PISQ-12 questionnaire was also used as a standard assessment tool for pelvic organ prolapse, urinary incontinence and sexual gratification. Patients were also asked about treatment discomfort, potential adverse effects, and their general satisfaction with the treatment.

The IntimaLase treatment consisted of two phases. In the first phase, the complete length of the vaginal canal was subjected to laser irradiation, while in the second phase the introitus and vestibule were irradiated as well. To perform the first phase – the irradiation of the vaginal canal, specially designed accessories were used – a laser speculum and a circular beam delivery adapter – enabling quick and easy irradiation of the vaginal canal in its full circumference.



Fig. 2: The first phase of IntimaLase® treatment: laser speculum and circular adapter enable delivery of a 360° radial laser beam.

At the end of the processes, the treated tissue becomes enriched with new collagen, appearing younger, tighter and more elastic, thus improving vaginal laxity and reducing the effects of vaginal relaxation syndrome.

After the completion of the first phase of the IntimaLase procedure, the laser handpiece and laser speculum are removed and the second phase of the procedure is executed using a straight-shooting fractional laser handpiece that delivers energy to the whole area of the vestibule and introitus with the manufacturer's same proprietary sequence, depositing approximately 10 J of laser energy in each laser sequence.

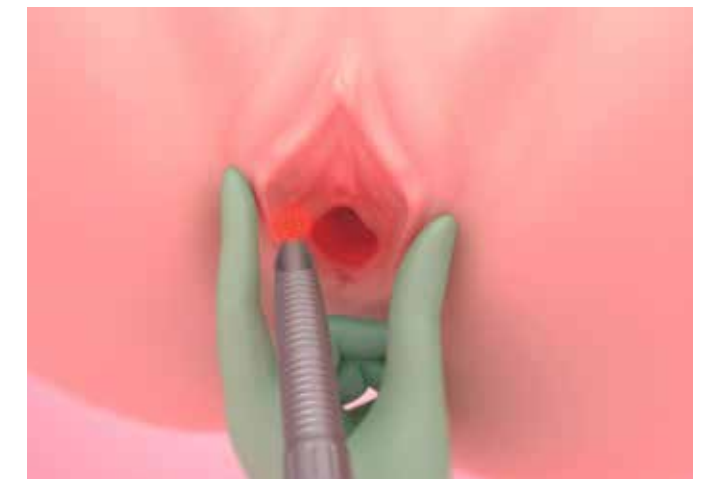


Fig. 3: Treatment detail of the second phase of IntimaLase® treatment – irradiation of the introitus.

Topical anesthesia (a cream composed of 2% Lidocain combined with Prilocain) was applied to the vestibule and introitus area before each session.

No special post-op therapy was needed. Patients were only requested to restrain from sexual activities for a period of 72 hours after each of the treatment sessions.

Follow-ups were scheduled at 48 hours after each session (via telephone interview with the patient), during the second visit, prior to the second treatment session (15-30 days after the first session) and at 3 months after the completion of therapy when patients were asked to answer the LVT questionnaire and self-assess the efficacy of the IntimaLase laser vaginal tightening treatment.

Results exceeded the expectations

Twenty of twenty one patients (95%) reported significant (moderate and strong) improvement of their vaginal tightness, and also all of their partners confirmed an improvement of vaginal tightness during sexual intercourse (85% reported significant improvement and 15% reported mild improvement). All patients but one (95%) reported better sex after the treatment. Five patients had prolapses (of stages 1-3) before receiving the treatment, which improved in all of these patients, leaving just two of them with prolapses (one with stage 1 and one with stage 2). Three patients suffering from SUI before the treatment reported significant improvement (2) and complete healing (1). There were no adverse effects and patient discomfort was assessed as minimal.

The results achieved exceeded the expectations we had at the beginning of this study. We are aware that our follow-up after the treatment was short and we plan to continue and expand this study with the aim to get an assessment of the longevity of the achieved results.

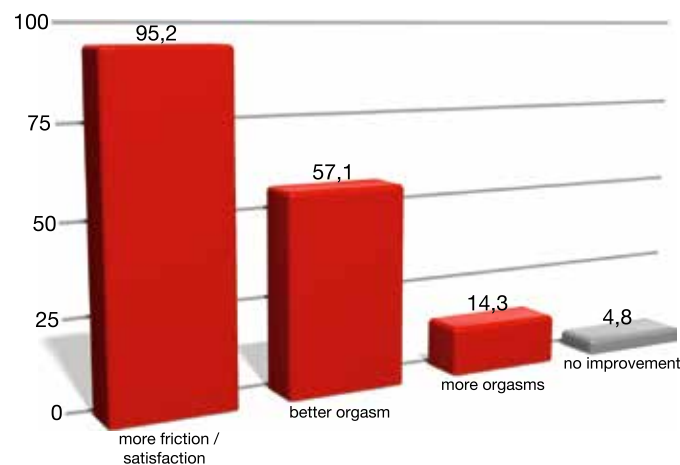


Fig. 5: Patients' assessment of sexual gratification improvement after IntimaLase® treatment. Out of 21 patients, 20 reported better sex due to: better sensation (95.2%), better orgasm (57.1%) and more orgasms (14.3%).

Minimal discomfort, maximum improvement

Female sexual dysfunction is a complex psychophysiological problem involving psychological, neurological, hormonal, and physiological aspects. A patient's sexual history and relationship with their sexual partner play very important roles in female sexual health and influence the experience of sexual gratification.

This pilot study of the efficacy and safety of a novel non-invasive Er:YAG laser treatment for vaginal relaxation syndrome demonstrated very good efficacy in improvement of vaginal tightness with minimal patient discomfort during the treatment and no adverse effects.

Regarding the safety, tolerability and return to sexual activity, we found the IntimaLase treatment to be much safer (no adverse effects, minimal discomfort, return to normal sexual activities 72 hours after the treatment) than all of the other procedures. We also found the IntimaLase treatment quick and easy to perform in ambulatory conditions. Measurements of the laser session duration taken during the execution of the second session resulted in an average laser treatment duration of only 8 minutes. *

This article was adapted from:
Gaviria J, Lanz J. Laser Vaginal Tightening (LVT) – evaluation of a novel noninvasive laser treatment for vaginal relaxation syndrome. LA&HA J Laser and Health Academy. Vol 2012, No 1. pp 59-66.

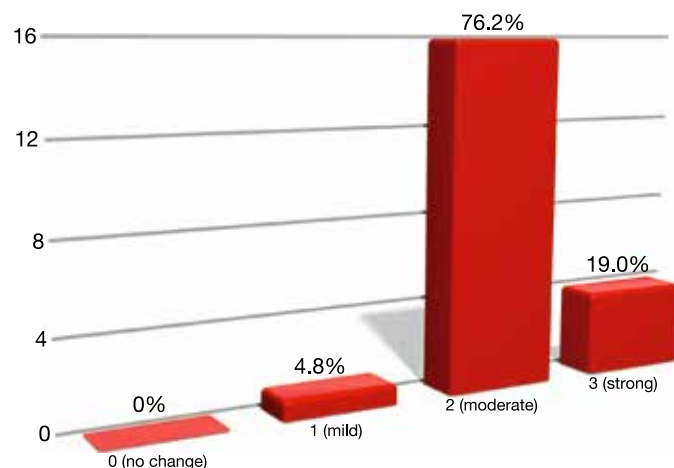


Fig. 4: Patients' self-assessment of improvement in vaginal tightness after IntimaLase® treatment. All patients reported improvement, with 95% assessing the improvement as "moderate and strong."

Twenty of twenty one patients reported significant improvement of their vaginal tightness, and also all of their partners confirmed an improvement of vaginal tightness during sexual intercourse.

In-depth

A minimally invasive solution for stress urinary incontinence (SUI)

By Dr. I. Fistic, Dr. S. Findri-Gustek and Dr. N. Fistic

Stress urinary incontinence (SUI) is the most common form of UI in women; it is defined as the involuntary loss of urine during coughing, sneezing, or physical exertion such as sporting activities or sudden change in position, and is estimated to affect between 4% to 14% of younger women and 12% to 35% of older women.

The etiology of stress-incontinence is not completely understood. Dietz and Clarke proposed that the causes of SUI were relaxation of the anatomical structure that supports the periurethral tissue and impairment of the urethral sphincter. Damage to the pelvic floor neuromusculature during vaginal delivery may lead to loss of pelvic muscle strength and nerve function, resulting in both stress urinary incontinence (SUI) and pelvic floor support defects. PFD can also lead to pelvic organ prolapse - a condition where organs, such as the uterus, fall down or slip out of place.

Researchers have suggested that the ligaments of women with stress urinary incontinence have decreased collagen content or qualitative alterations in collagen composition. Women with stress urinary incontinence have an altered connective tissue metabolism causing decreased collagen production, which may result in insufficient support of the urogenital tract. A study by Wong et al. showed that cervical collagen content is significantly decreased in women who have pelvic organ prolapse with and without stress urinary incontinence. The pubocervical fasciae of incontinent women show a diminished content of collagen which may contribute to the weakening of support of the bladder neck.

Laser treatment for SUI: Minimally invasive and collagen remodeling

The medical effects of lasers are well established in terms of biochemical, ablative and thermal effects. Thermal energy from the laser source, especially in moist environments, not only effectively enhances collagen structure but also stimulates neocollagenesis. As a result of laser irradiation the intermolecular cross-links of the triple helix of collagen shorten, which leads to the immediate tightening of collagen fibrils by two-thirds of their length in comparison to the pre-intervention state and stimulates neocollagenesis.

A novel laser treatment known as IncontiLase® is one of the most promising minimally invasive laser techniques that enable collagen remodeling. In a preliminary pilot study, we have showed that this laser treatment for the early stages of SUI, with or without prolapse, effectively improves the symptoms of SUI as well as relevant parameters of pelvic floor muscle strength and quality of life, thus avoiding or postponing the need for possible surgical interventions.

As a result of laser irradiation the intermolecular cross-links of the triple helix of collagen shorten, which leads to the immediate tightening of collagen fibrils by two-thirds of their length in comparison to the pre-intervention state.

Pilot study procedure: shrinking the collagen with non-ablative thermal mode, followed by straight-shooting fractional laser handpiece

In an open-labeled, prospective, single-center pilot study, 39 patients suffering from stress urinary incontinence underwent treatment with a 2940 nm Er:YAG laser (Fotona XS model, Slovenia). The objective of the study was to assess the efficacy and safety of a novel minimally invasive, non-ablative laser treatment in the early stages of SUI.

The patients were between 30 and 61 years of age (average age 42.6 years) with an average body mass index of 23.5 and parous status from 1-4 (on average 2.2). The birth weight of the children was between 2650 and 4350 g (on average 3340g). All of the patients had delivered vaginally.

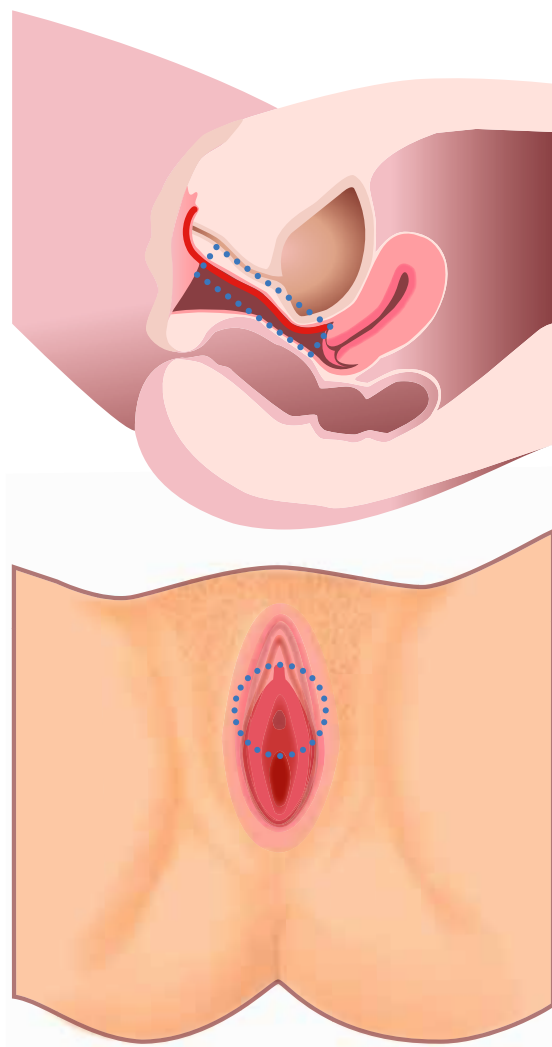


Fig. 1: The two step IncontiLase® procedure

The anterior vaginal wall and introitus were treated by Er:YAG laser (2940 nm) (XS Dynamis, Fotona, Slovenia) in a non-ablative thermal mode according to the manufacturer's proprietary sequence (Fotona, Slovenia), producing a precisely controlled, non-ablative thermal-only effect on the mucosa tissue and endopelvic fascia of the vaginal wall that causes shrinkage of collagen in the vaginal mucosa.

The second phase of the IncontiLase® procedure was performed on the vestibule and introitus area using a straight-shooting fractional laser handpiece. The whole area has to be thoroughly covered with laser energy to achieve a sufficient level of thermal impact on the collagen in the treated mucosa.

During the execution of the procedure patient discomfort and treatment tolerability, as well as potential adverse events were monitored. No anesthesia was used before or during the first session.

Preliminary results of post-treatment evaluation showed significant improvement ($p < 0.05$) in all the domains tested: ICIQ-UI scores decreased by more than 3 points at all follow-ups. A mean duration of muscle contraction measured with perineometry at 1 month increased by 4.7 s, at 3 months by 11.8 s and at 6 months by 22.8 s. Q-tip angle decreased by 14.7° at 1 month follow-up, by 15.9° at 3 months and by 22.5° at 6 months. PISQ-12 scores increased after 1 month by 5.4 points, after 3 months by 5.9 points and after 6 months by 6.6 points.

The preliminary results of the pilot study confirm that a minimally invasive, non-ablative fractional laser

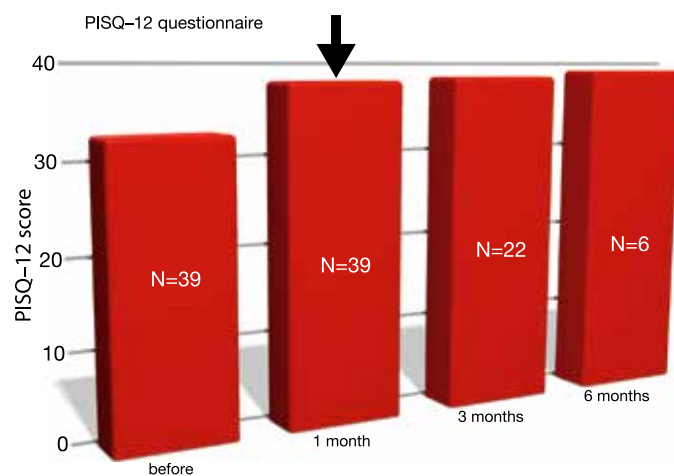


Fig. 2: Patients' assessment of improved sexual gratification measured with PISQ-12 questionnaires before the treatment and after 1, 3 and 6 month follow-ups. The improvement after IncontiLase® treatment after 6 months was more than 6 score points.

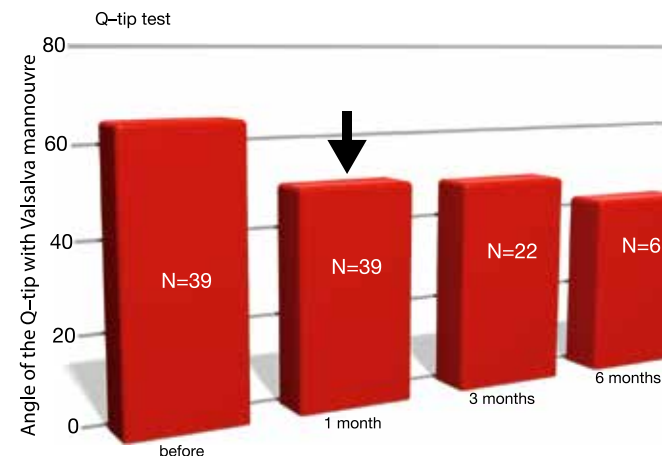


Fig. 3: Q-tip measurement was used to investigate the degree of genital prolapse. Angles of the Q-tip with the Valsalva manoeuvre before the treatment and after 1, 3 and 6 months are represented. The Q-tip angle after the treatment decreased by more than 20° .

treatment (IncontiLase) is an effective, safe and comfortable treatment option for symptom relief in patients with mild and moderate SUI.

Effectively beating the condition as well as the taboo

Despite its prevalence and the associated distress, embarrassment, and diminished quality of life, many women who experience symptoms of SUI choose to delay or do not seek medical treatment because of lack of knowledge about possible treatments or fear that the treatment will require surgery. Public interest in less invasive, efficient, safe and in-office procedures for treatment of SUI is therefore growing.

In our pilot study with 6 month follow-up of patients with mild to moderate stress urinary incontinence treated with non-ablative laser using the IncontiLase method, we demonstrated the efficacy and safety of the procedure. To our knowledge, this is the first study using nonsurgical intravaginal laser treatment for SUI.

Regarding safety and tolerability, we have not noticed any adverse events throughout the whole course of treatment and the follow-up period. All patients returned to their daily activities immediately after treatment. We have concluded that IncontiLase is a safe treatment and that patients find it comfortable and non invasive.

In conclusion, in this pilot study with a 6-month follow-up, preliminary results show that the minimally invasive non-surgical IncontiLase® treatment offers an efficacious solution for SUI, and is associated with high a level of safety and a short recovery period. ✱

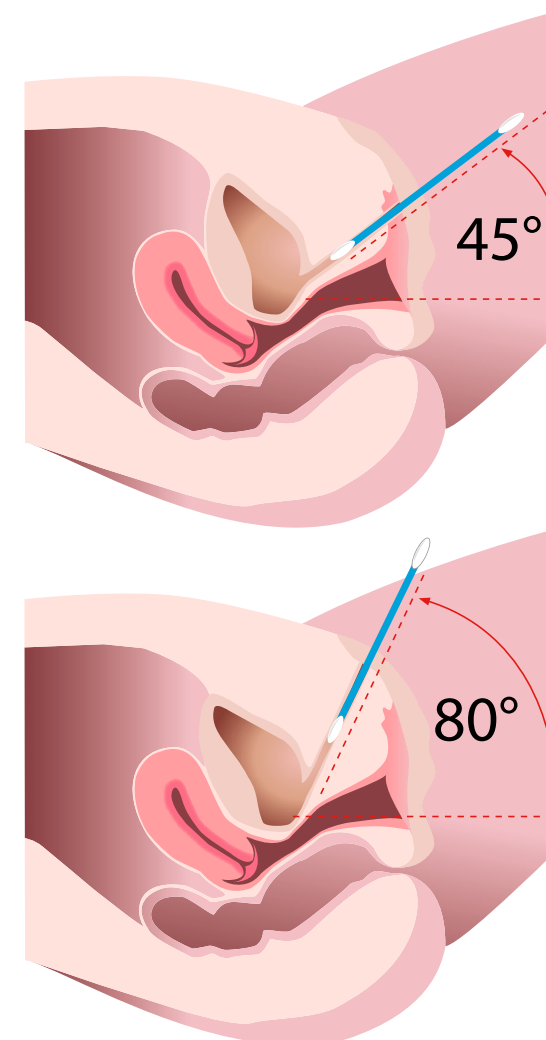


Fig. 4: The cotton-tipped swab (Q-tip) test for assessment of urethral and bladder support. A: Angle of the Q-tip with Valsalva manoeuvre. The urethrovesical junction descended, causing upward deflection of the Q-tip. B: Q-tip measurements with Valsalva manoeuvre after IncontiLase® treatment.

In this pilot study with a 6-month follow-up, preliminary results show that the minimally invasive non-surgical IncontiLase® treatment offers an efficacious solution for SUI, and is associated with high a level of safety and a short recovery period.

This article was adapted from: Fistic I, Findri-Gustek S, Fistic N. Minimally invasive laser procedure for early stages of stress urinary incontinence (SUI). LA&HA J Laser and Health Academy. Vol 2012, No 1. pp 67-74.

IncontiLase® is an effective and durable non-invasive treatment for stress urinary incontinence – study in 175 women with a 12-month follow-up

By Urška B. Ogrinc, Sabina Senčar and Helena Lenasi

Published in: Lasers Surg Med. 47(9):689-697.

1 PUBLISHED IN HIGH-IMPACT PEER-REVIEWED LASER MEDICINE JOURNAL

Lasers in Surgery and Medicine is the official journal of the American Society for Laser Medicine and Surgery (ASMLS) – it publishes the highest quality research and clinical manuscripts in the use of lasers in medicine and biology.

2 LARGE GROUP OF TREATED PATIENTS

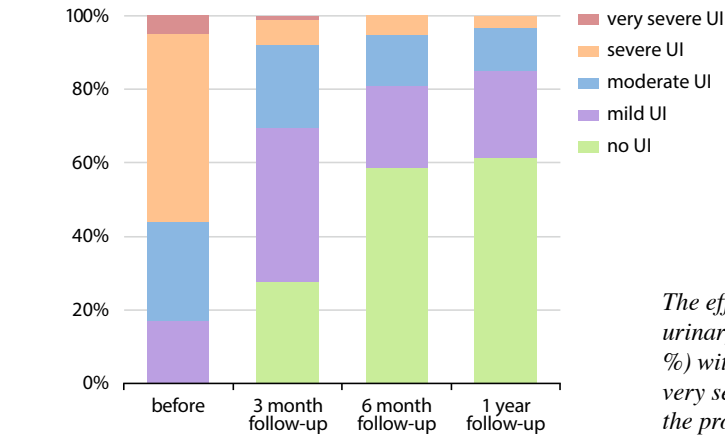
The prospective trial included 175 patients, who received 2-3 sessions of IncontiLase® treatment and were followed up to 12 months post-treatment. The study assessments included ICIQ questionnaire and ISI incontinence severity index determination, patient satisfaction questionnaire and VAS pain scale.

3 EXCELLENT RESULTS

One year after the IncontiLase® treatment, 62% of patients were free of symptoms of urinary incontinence. Results were even better in patients with pure stress urinary incontinence - 77% of these patients were dry 1 year after treatment.

4 INCONTILASE IS A HIGHLY EFFICIENT AND SAFE METHOD FOR PATIENTS SUFFERING FROM STRESS URINARY INCONTINENCE

Patients with mixed urinary incontinence also get relief in stress symptoms, so it could be used in conjunction with overactive bladder therapy.



OPEN ACCESS

Lasers in Surgery and Medicine 47:689–697 (2015)

Novel Minimally Invasive Laser Treatment of Urinary Incontinence in Women

Urška B. Ogrinc, MSc, MSc,¹ Sabina Senčar, MSc,¹ and Helena Lenasi, PhD, MSc^{2*}

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Background and Objective: Urinary incontinence (UI) is a common disorder that affects women of various ages and impacts all aspects of life. Our aim was to evaluate the non-invasive erbium:yttrium-aluminum-garnet (Er:YAG) laser that exploits its thermal effect and has been used in reconstructive and rejuvenation surgery as a potential treatment strategy for stress UI (SUI) and mixed UI (MUI).

Study Design/Materials and Methods: We included 175 women (aged 49.7 ± 10 years) with newly diagnosed SUI (66% of women) and MUI (34%), respectively. Patients were clinically examined and classified by incontinence types (SUI and MUI) and grades (mild, moderate, severe, and very severe) using International Consultation on Incontinence Modular Questionnaire (ICIQ) and assessing Incontinence Severity Index (ISI). Using Er:YAG laser, we performed on average 2.5 ± 0.5 procedures in each woman separated by a 2 month period. At each session, clinical examination was performed, ICIQ and ISI assessed and treatment discomfort measured with visual analog system (VAS) pain scale, and adverse effects and patients' satisfaction were followed. Follow-ups were performed at 2, 6, and 12 months after the treatment.

Results: After the treatment, ISI decreased for 2.6 ± 1.0 points in patients diagnosed with mild UI before the treatment, for 3.6 ± 1.4 points in those with moderate UI, for 5.7 ± 1.8 points in those with severe UI and for 8.4 ± 2.6 in those with very severe UI (P < 0.001, paired samples t-test). Altogether, in 77% patients diagnosed with SUI, a significant improvement was found after treatment, while only 34% of women with MUI exhibited no UI at one year follow-up. Age did not affect the outcome. No major adverse effects were noticed in either group.

Conclusion: The results of our study, have shown that new non-invasive Er:YAG laser could be regarded as a promising additional treatment strategy for SUI with at least one year lasting positive effects. On the other hand, it does not seem appropriate for treating MUI. Lasers Surg Med. 47:689–697, 2015. © 2015 Wiley Periodicals, Inc.

Key words: Er-Yag laser; gynecology; non-invasive procedure; stress urinary incontinence; mixed urinary incontinence

*Sabina Senčar and Helena Lenasi contributed equally to this work.

Conflict of Interest Disclosures: All authors have completed and submitted the ICMJE Form for Disclosure of Potential Conflicts of Interest and none were reported.

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The effect of IncontiLase therapy on the improvement of the grade of urinary incontinence (UI). Figure shows the distribution of patients (in %) with regard to the grade of incontinence (mild, moderate, severe, very severe) before treatment, at 2 months, six months and one year after the procedure.

How do SMOOTH™ treatments affect the vaginal mucosa? This paper gives mechanistic data along with clinical evidence in patients with stress urinary incontinence

By Fistonić et. al.

Published in: Lasers Med Sci, Feb 9, 2016, DOI: 10.1007/s10103-016-1884-0

1 INTERDISCIPLINARY APPROACH - PHYSICS AND MEDICINE HAND IN HAND TO SHOW INCONTILASE® MODE OF ACTION

The paper, published in a high-impact medical laser journal, combines computer modelling on SMOOTH™ mode pulsing thermal effect on the tissue, confirms the numerical calculations using thermal camera imaging in vivo, and presents data from a pilot study done in 31 patients suffering from stress urinary incontinence, proving that gentle heat pulsing of vaginal wall mucosa can improve the symptoms of stress urinary incontinence.

2 SMOOTH™ PULSES GENTLY HEAT THE VAGINAL MUCOSA TO THE IDEAL TEMPERATURE

Numerical modelling and in vivo thermal camera measurements showed that SMOOTH™ laser pulses warm up the vaginal wall mucosa to peak temperatures up to 65°C, which is ideal for collagen remodeling and strengthening of the tissue, without damaging the epithelium.

3 CLINICAL STUDY IN PATIENTS WITH STRESS URINARY INCONTINENCE

The pilot clinical study used the IncontiLase® protocol, which delivers SMOOTH™ pulses to the vaginal canal using a patented pulsing sequence, with an emphasis on the anterior vaginal wall. One treatment session was performed and the results were evaluated up to 6 months after treatment. ICIQ questionnaire, perineometry and post void residual volume were among the study assessments.

4 PILOT CLINICAL STUDY HAS SHOWN SIGNIFICANT AND CLINICALLY MEANINGFUL IMPROVEMENT IN INCONTINENCE SYMPTOMS AFTER INCONTILASE® TREATMENT

Significant improvement of urinary incontinence symptoms was seen at all follow-ups. Patients also had significantly improved voiding function.



OPEN ACCESS

Lasers Med Sci
DOI 10.1007/s10103-016-1884-0

ORIGINAL ARTICLE

Minimally invasive, non-ablative Er:YAG laser treatment of stress urinary incontinence in women—a pilot study

Nikola Fistončić¹ · Ivan Fistončić² · Stjepica Fintić² · Iva Šorta Biljac Turina³ · Ingrid Marton⁴ · Zdenko Viližinić⁵ · Marko Kažić⁵ · Irena Hreljac⁵ · Tadej Perhavec⁵ · Matjaž Lukač⁵

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Abstract The study presents an assessment of mechanism of action and a pilot clinical study of efficacy and safety of the Er:YAG laser for the treatment of stress urinary incontinence (SUI). The subject of this study is a treatment of SUI with a 2940 nm Er:YAG laser, operating in a special SMOOTH mode designed to increase temperature of the vaginal mucosa up to maximally 60–65 °C without ablating the epidermis. Numerical modelling of the temperature distribution within mucosa tissue following an irradiation with the SMOOTH mode Er:YAG laser was performed in order to determine the appropriate range of laser parameters. The laser treatment parameters were further confirmed by measuring in vivo temperatures of the vaginal mucosa using a thermal camera. To investigate the clinical efficacy and safety of the SMOOTH mode Er:YAG laser SUI treatment, a pilot clinical study was performed. The study recruited 31 female patients suffering from SUI. Follow-ups were scheduled at 1, 2, and 6 months post treatment. ICIQ-UI questionnaires were collected as a primary trial endpoint. Secondary endpoints included perineometry and residual urine volume measurements at baseline and all follow-ups. Thermal camera measurements have shown the optimal increase in temperature of the vaginal mucosa following treatment of SUI with a SMOOTH mode Er:YAG laser. Primary endpoint, the change in ICIQ-UI score, showed clinically relevant and statistically significant improvement after all follow-ups compared to baseline scores. There was also improvement in the secondary endpoints. Only mild and transient adverse events and no serious adverse events were reported. The results indicate that non-ablative Er:YAG laser therapy is a promising minimally invasive non-surgical option for treating women with SUI symptoms.

Keywords Stress urinary incontinence · Er:YAG laser · Minimally invasive SUI therapy

Introduction

Female stress urinary incontinence [1] is a significant public health problem, with estimated prevalence rates ranging from 4–35 % of adult women [2].

The initial treatment option for SUI is pelvic floor muscle training (PFMT), which produces good results, but often fails to achieve consistent long-term improvement because of poor patient compliance and lack of support and guidance [3, 4]. Traditional surgical approaches such as open or laparoscopic colposuspension and anterior vaginal repair have been largely replaced with less-invasive midurethral sling suspension procedures, which have popularized the surgical option of treating SUI among patients [5, 6]. While midurethral sling procedures are highly effective, they are associated with adverse events and complications such as bleeding, bladder perforation, urethral injury, infection, and groin pain [7]. In recent years, single incision polypropylene mesh mini-slings have been introduced and have become very popular due to the

Brief summary Er-YAG laser therapy is a promising minimally invasive non-surgical option for treating female stress urinary incontinence

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Published online: 09 February 2016

Springer

In-depth

IntimaLase® – an effective treatment for vaginal relaxation syndrome

By Jorge E. Gaviria, Jose A. Lanz

Published in: LAHA Journal of Laser and Health Academy, 2012(1); 46-58.

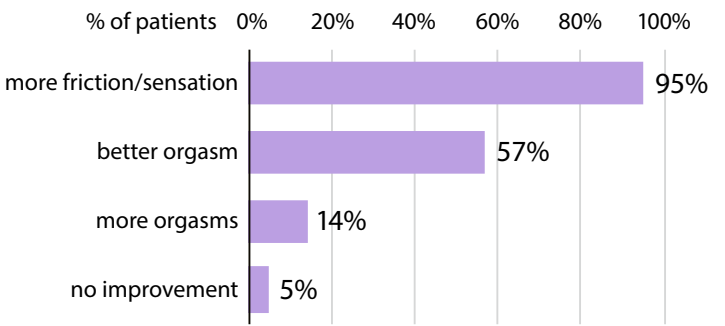


1 PIONEERING STUDY OF NON-INVASIVE LASER VAGINAL TIGHTENING - INTIMALASE®
Published in LAHA (Journal of the Laser and Health Academy), an international peer reviewed journal that follows new trends in laser medicine.

2 TREATMENT OF VAGINAL RELAXATION SYNDROME WITH THE AIM OF IMPROVING SEXUAL LIFE
Vaginal Relaxation Syndrome is described as a loss of the optimal vaginal structure and is usually associated with vaginal child delivery and natural aging. Loss of vaginal tightness is directly related to reduction of friction during intercourse and thus to a decrease or loss of sexual gratification.

3 MATERIALS AND METHODS
21 patients suffering form vaginal looseness were treated with erbium gynecological laser (Fotona, Slovenia). Treatment consisted of two sessions with an interval between the sessions 15 to 30 days.

4 INTIMALASE® TREATMENT STRONGLY IMPROVES SEXUAL GRATIFICATION OF PATIENTS AND THEIR PARTNERS
95% of patients assessed their vaginal tightness and sexual gratification as strongly or moderately improved after laser vaginal tightening. All patients' sexual partners recognized the improvement in sensation, 85% assessing it as moderate or strong.



OPEN ACCESS

Journal of the Laser and Health Academy
Vol. 2012, No.1; www.laserandhealth.com

ISSN 1855-9913

Laser Vaginal Tightening (LVT) – evaluation of a novel noninvasive laser treatment for vaginal relaxation syndrome

Jorge E. Gaviria P, Jose A. Lanz L
Albana Laser Center, Caracas, Venezuela

ABSTRACT

The objective of this study was to evaluate the safety and efficacy of a novel laser treatment for vaginal relaxation syndrome.

Method: A pilot study was conducted on 21 patients who received the novel laser treatment (IntimaLase) for vaginal tightening with a 2940 nm Er:YAG laser between June 2011 and January 2012. All patients received two treatment sessions with an interval between sessions of 15 to 30 days. In a non-ablative, thermal-only mode, laser energies of approx. 90J per treated area in the vaginal canal and of approx. 10J per treated area at the vestibule and introitus were delivered to the patient's vaginal mucosa. A special Laser Vaginal Tightening (LVT) questionnaire was designed for assessing the improvement of vaginal tightness via patient self evaluation and by their sexual partner's assessment. POP-Q measurements were also performed prior to both treatment sessions in an attempt to objectively assess the change in vaginal tissue structure. Additionally, a PISQ-12 questionnaire was also used as a standard assessment tool for pelvic organ prolapse, urinary incontinence and sexual gratification. Patients were also asked about treatment discomfort, potential adverse effects, and their general satisfaction with the treatment.

Results: Twenty of twenty one patients (95%) reported significant (moderate and strong) improvement of their vaginal tightness, and also all of their partners confirmed an improvement of vaginal tightness during sexual intercourse (85% reported significant improvement and 15% reported mild improvement). All patients but one (95%) reported better sex after the treatment. Five patients had prolapses (of stages 1-3) before receiving the treatment, which improved in all of these patients, leaving just two of them with prolapses (one with stage 1 and one with stage 2). Three patients suffering from SUI before the treatment reported significant improvement (2) and complete healing (1). There were no adverse effects and patient discomfort was assessed as minimal.

Conclusions: The novel laser vaginal tightening therapy (IntimaLase) is an effective and safe method for the treatment of vaginal relaxation syndrome.

Key words: vaginal relaxation syndrome, laser treatment, Er:YAG laser, collagen remodeling and synthesis

Article J. LAHA, Vol 2012, No.1; pp. 59-66.
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I. INTRODUCTION

Vaginal Relaxation Syndrome (VRS) is a quite common medical condition described as a loss of the optimal vaginal structure and is usually associated with vaginal child delivery and natural aging. Multiple pregnancies and deliveries contribute to a worsening of the VSR condition, as well as the onset of menopause, which causes a decline in hormone levels and vaginal atrophy. Most women (and their husbands or partners) refer to vaginal relaxation syndrome as "loose vagina" [1], complaining of a loss of vaginal tightness, which is directly related to the reduction of friction during intercourse and thus to a decrease or loss of sexual gratification [2].

There is a large spectrum of various VRS treatment options on the market ranging from behavioral (Kegel exercises) through pharmacological therapies (hormonal, tightening creams and sprays) to various more-or-less invasive surgical procedures. While behavioral and pharmacological therapies are noninvasive and safe, they have limited efficacy. On the other hand, various surgical procedures promise a much better final result at the price of higher associated risks.

Surgical procedures require the cutting and rearrangement of vaginal and peripheral tissue in order

Fig. 1: Tight vs. expanded (relaxed) vagina

MAY 2012 59

Patients' assessment of sexual gratification improvement after IntimaLase treatment.

In-depth

RenovaLase® treatment induces significant improvement of genitourinary syndrome of menopause (GSM)

By M. Gambacciani, M. Levancini and M. Cervigni

Published in Climacteric. 2015;18(5):757-763.



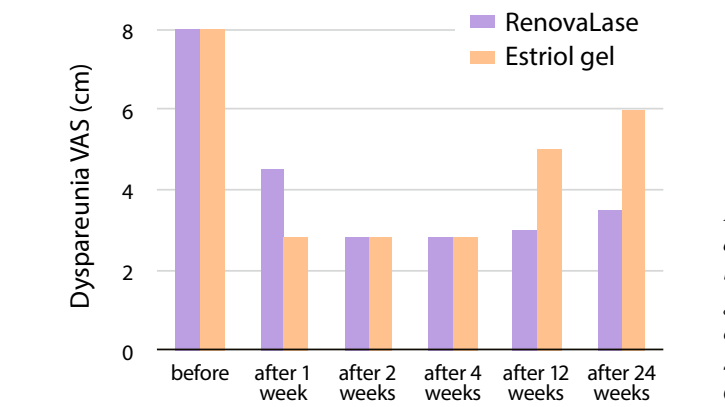
1. HIGH IMPACT JOURNAL
Published in Climacteric, the Journal of the International Menopause Society (IMS). The journal was founded in 1998 and has become a leader in publishing peer-reviewed research on the menopause.

2 HORMONE-FREE TREATMENT FOR THE SYMPTOMS OF GENITOURINARY SYNDROME OF MENOPAUSE (GSM)
GSM (or vulvovaginal atrophy) is a chronic condition, which affects up to half postmenopausal women. Symptoms of GSM include dryness, burning, irritation, but also lack of lubrication and impaired sexual function. Traditional treatments have been limited to local or systemic estrogen therapy.

3 MATERIALS AND METHODS
45 postmenopausal women with symptoms of GSM were treated with a non-ablative vaginal erbium laser (Fotona, Slovenia).

As a control group, 25 postmenopausal women were treated with an established treatment for GSM (1g of vaginal gel containing 50 µg of estriol twice weekly, for 3 months).

4 SIGNIFICANT IMPROVEMENT OF VAGINAL DRYNESS AND DYSPAREUNIA
RenovaLase treatment resulted in a rapid and long-lasting improvement in the signs and symptoms of GSM. This treatment is of special importance in postmenopausal women who cannot be treated with hormones.



OPEN ACCESS

CLIMACTERIC 2015;18(5):757-763

Vaginal erbium laser: the second-generation thermotherapy for the genitourinary syndrome of menopause

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Key words: ERBIUM LASER, MENOPAUSE, GENITOURINARY SYNDROME OF MENOPAUSE, VAGINAL ATROPHY, DYSPAREUNIA, STRESS URINARY INCONTINENCE

ABSTRACT

Aim: To evaluate the effects of the vaginal erbium laser (VEL) in the treatment of postmenopausal women suffering from genitourinary syndrome of menopause (GSM).

Method: GSM was assessed in postmenopausal women before and after VEL (one treatment every 30 days, for 3 months; n = 45); the results were compared with the effects of a standard treatment for GSM (1 g of vaginal gel containing 50 µg of estriol, twice weekly for 3 months; n = 25). GSM was evaluated with subjective (visual analog scale, VAS) and objective (Vaginal Health Index Score, VHIS) measures. In addition, in 19 of these postmenopausal women suffering from stress urinary incontinence (SUI), the degree of incontinence was evaluated with the International Consultation on Incontinence Questionnaire-Urinary Incontinence Short Form (ICIQ-UI-SF) before and after VEL treatments.

Results: VEL treatment induced a significant decrease of VAS of both vaginal dryness and dyspareunia (p < 0.01), with a significant (p < 0.01) increase of VHIS. In postmenopausal women suffering from mild to moderate SUI, VEL treatment was associated with a significant (p < 0.01) improvement of ICIQ-SF scores. The effects were rapid and long lasting, up to the 24th week of the observation period. VEL was well tolerated with less than 3% of patients discontinuing treatment due to adverse events.

Conclusion: This pilot study demonstrates that VEL induces a significant improvement of GSM, including vaginal dryness, dyspareunia and mild to moderate SUI. Further studies are needed to explore the role of laser treatments in the management of GSM.

INTRODUCTION

The genitourinary syndrome of menopause (GSM) is the new definition for the variety of menopausal symptoms associated with physical changes of the vulva, vagina, and lower urinary tract, related with estrogen deficiency¹. GSM is chronic and is likely to worsen over time, affecting up to 50% of postmenopausal women²⁻⁴. The symptoms related to GSM include genital symptoms of dryness, burning, irritation, but also sexual symptoms of lack of lubrication, discomfort or pain, and impaired function, as well as urinary symptoms of urgency, dysuria and recurrent urinary tract infections¹. All these symptoms may interfere with sexual function and quality of life⁵⁻¹¹. Most moisturizers and lubricants are available without prescriptions, at a non-negligible cost, and may provide only a temporary relief. Conversely, hormone replacement therapy (HRT) can provide quick and long-term relief¹²⁻¹⁵, while urinary symptoms often require additional, effective therapies¹⁶⁻¹⁹. When HRT is considered solely for the treatment of vaginal atrophy, local vaginal estrogen administration is the treatment of choice¹⁴⁻¹⁵. Although systemic risks have not been identified with local low-potency/low-dose estrogens,

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ORIGINAL ARTICLE
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Effect of RenovaLase therapy on dyspareunia using the visual analog score (VAS) on a 10-point scale for the women receiving laser treatment and the women receiving estriol. In the estriol group, a reduction of efficacy can be seen 12 weeks after the end of treatment. Conversely, the RenovaLase group maintained the same positive results throughout the entire study period up to the 6-month follow-up.

RenovaLase® treatment reduces the symptoms of Genitourinary Syndrome of Menopause (GSM) in Breast Cancer Survivors.

By M. Gambacciani, M. Levancini

Published in Ital Journal Gynaecol Obstet. 2015;27(1):15-17.



Vaginal Erbium Laser: the Second Generation Thermotherapy for the Genitourinary Syndrome of Menopause (GSM) in Breast Cancer Survivors. A preliminary report of a pilot study

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ABSTRACT

This is a preliminary report of a pilot study aimed to assess the effectiveness and safety of vaginal erbium laser in the treatment of Genitourinary Syndrome of Menopause (GSM) in postmenopausal breast cancer survivors. GSM symptoms were assessed before and after three applications of erbium laser in 13 women, using subjective (visual analog scale) and objective (Vaginal Health Index Score, VHIS) measures. Vaginal Erbium Laser treatment was effective to improve GSM symptoms. Both subjective and objective scores significantly improved in comparison with baseline values ($p < 0.01$). No adverse events were recorded during the study period. This preliminary results suggest that Vaginal Erbium Laser is effective and safe for the treatment of GSM in postmenopausal Breast Cancer Survivors.

Keywords: Menopause, Estrogen, Erbium Laser, Genitourinary Syndrome of Menopause, Breast Cancer Survivors

INTRODUCTION

The genitourinary syndrome of menopause (GSM) may affect up to 50% of postmenopausal women and their symptoms tend to be progressive, jeopardizing the quality of life and sexual relationships⁽¹⁻³⁾. Local hormone replacement therapy (HRT) is the treatment of choice⁽⁴⁻⁶⁾. However, many women have contraindications, such as a history of estrogen-dependent tumors, particularly endometrial cancer and breast cancer⁽⁷⁻⁹⁾. No single agent can globally ameliorate the quality of life of breast cancer survivors, coping with menopausal symptoms. Particularly, specific studies on GSM treatment in breast cancer survivors are scarce. Laser technology is currently widely used with positive effects demonstrated on basic and clinical studies on tissue remodeling, collagenogenesis and angiogenesis⁽¹⁰⁻¹²⁾. The different types of lasers have different physical

characteristics that determine specific effects on tissues. Recently in a pilot study, Salvatore et al.⁽⁸⁾ demonstrated that treatment with fractionated CO2 laser induced a significant improvement of the GSM in postmenopausal women. The aim of this study is to evaluate the short-term efficacy and acceptability of a second generation of vaginal laser treatment, using an erbium laser crystal yttrium-aluminum-garnet (Er: YAG) as a non-ablative photothermal therapy for the management of GSM in breast cancer survivors.

MATERIAL AND METHODS

This is a pilot study, conducted in women attending menopause clinic of Pisa University Hospital with an history of treated breast cancer and suffering from GSM. All patients gave written informed consent. The protocol was revised by an National Independent Advisory Board and approved by the Ethics Committee of the Department of Obstetrics and Gynecology. The

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1 IMPORTANT PILOT STUDY IN A SPECIFIC PATIENT POPULATION

The genitourinary syndrome of menopause (or vulvovaginal atrophy) affects almost half of all postmenopausal women. Because local hormone replacement therapy is contraindicated in women with a history of estrogen-dependent tumors, till now there was no single agent which could ameliorate the quality of life for this patients.

2 MATERIALS AND METHODS

13 postmenopausal women with the presence of GSM and a history of treated breast cancer were treated with Erbium gynecological laser (Fotona, Slovenia). Patients received 3 laser sessions, each 30 days apart. Subjective symptoms (vaginal dryness and dyspareunia) were assessed using a visual analogue scale (VAS) and Vaginal Health Index Score (VHIS) was calculated.

3 RENOVALASE® TREATMENT INDUCES SIGNIFICANT IMPROVEMENT OF GSM

Vaginal dryness and dyspareunia scores were progressively decreased following RenovaLase® treatment. The results were maintained at all follow-ups.

Vaginal Health Index Score (VHIS) was significantly increased after treatment and the results were maintained at all follow-ups. There were no adverse events reported.

4 RENOVALASE® IS EFFECTIVE AND SAFE TREATMENT OF GSM IN POSTMENOPAUSAL BREAST CANCER SURVIVORS

Significant reduction of GSM symptoms in breast cancer survivors is a revolutionary step-up in improving the long-term quality of life of this group of women. More studies in specific post-cancer patients are needed to fully assess the potential of RenovaLase® in specific groups of cancer survivors.



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Trends



With the new technologies making the cosmetic gynecological procedures easier to carry out for the physician and with only minimal downtime to the patient, the use of lasers will certainly to continue to drive this area forward.

Trends

Trends in cosmetic gynecology

By David Leahy

Surgeons practicing aesthetic vaginal techniques carry out a range of procedures, which are summarised in this article. As with any new procedures that stimulate public interest, the media has come up with some great, if not slightly concerning names. Vaginal rejuvenation, the ‘mummy makeover’, designer vaginas, reduction labiaplasty and vaginal tightening are among the growing number of terms used to describe procedures focused on female genital enhancement.

With the rapid expansion in demand for vaginal cosmetic surgery, both women and surgeons are becoming more conscious of the non-medical genital effects of childbirth, such as weight fluctuations, tissue laxity and anatomic idiosyncrasies, which can be very successfully addressed by a variety of surgical procedures.

Although cosmetic vaginal surgery or vaginal rejuvenation are the generally accepted terms, external or vulvar structures are also commonly treated as part of, or separately to tightening procedures. Other structures treated include the mons pubis, the labia majora and the labia minora including the clitoral hood or prepuce. The perineum, which forms the muscular bridge of connecting tissue between the anus and the vagina, the lower third of the posterior vaginal wall are also the areas typically operated on for vaginal tightening procedures. The anterior vaginal wall plays a reduced role in vaginal tightening, but a far greater role in the surgical treatment of urinary incontinence.

Screening & evaluation

Prior to undertaking any cosmetic vaginal surgery, a thorough gynecological evaluation is performed to screen for any pre-existing gynecological, urogynecological or urological conditions that could affect the timing of the procedure or influence the surgical strategy. Failure to carry out these pre-screens may result in considerable patient dissatisfaction with the cosmetic procedure or heighten aggravation of the medical condition. Consid-

eration must also be given prior to any of these cosmetic gynecological procedures to females of child bearing potential. Understanding the potential effects of future vaginal childbirth on the desired cosmetic procedure and that a caesarean delivery by patient request may not always be available.

Anesthesia

Invasive cosmetic vaginal surgeries, such as the anterior and posterior lift for tightening are routinely performed with general anesthesia, epidural anesthesia, spinal anesthesia or intravenous sedation with local infiltration and pudendal block. In some instances for semi-invasive procedures, both therapeutic and cosmetic surgeries can be performed under the same anesthesia. As technology and surgery have developed, however, there has been a noticeable move towards local anesthesia where appropriate, especially for less invasive procedures such as laser tightening. In fact, laser tightening with Fotona’s minimally invasive SMOOTH mode does not require any form of anesthesia, with patients just describing a warm sensation.

Vaginal Tightening

More commonly known as **vaginal rejuvenation**, procedures for reducing vaginal laxity originate from a class of gynecological procedures known as vaginoplasties or colporrhapies, initially developed for the treatment of prolapse of the bladder (cystocele) and of the posterior vaginal wall (rectocele). Mild-to-moderate degrees of vaginal laxity are now routinely corrected successfully by targeting the lower third of the posterior vaginal wall and the perineal body. In these procedures part of the wall is removed surgically and the sides then sutured back together to reduce the internal dimension.

The biggest breakthrough in recent years is the use of erbium laser in the non-ablative mode to internally tighten the vagina. One such laser made by Fotona uses a proprietary **Erbium SMOOTH mode** to give tightening without the need for any anesthesia. Data shows up to a 30% contraction with just one treatment. With the new technologies making the cosmetic gynecological procedures easier to carry out for the physician and with only minimal downtime to the patient, the use of lasers will certainly to continue to drive this area forward.

Mons Pubis

Individually or in combination, mons pubis laser lipolysis, liposuction or mons pubis lifting will act to alter the appearance of this area. Mons pubis contouring is typically performed in the supine position and is often combined with general abdominal liposuction. The clinical endpoint of mons pubis contouring is a uniform thickness of the fat contours between the landmarks, cephalad and caudad to the pubic bone without skeletonizing the latter. Mons pubis liposuction or contouring is also integral to conventional abdominoplasty when the lower incision edge is thicker than the upper edge.

The **mons pubis lift** procedure is a semi-invasive cosmetic option for women with a high degree of laxity in the mons pubis region and noticeable sagging of the labia majora, as viewed when the patient is in the standing position. The mons pubis lift is achieved by the precise alignment of the central tension vectors at the time of abdominoplasty. The pubic lift integrates well with mons pubis liposuction or the alternative contouring procedures and yields a more complete and balanced cosmetic solution for the abdominal wall.

Mons pubis laser lipolysis is a minimally invasive form of aesthetic surgery designed to remove excess body fat. It involves the use of a laser to rapidly dissolve excess fat in target areas such as the thighs, abdomen, arms, neck and parts of the face, using a minor “key-hole” surgical procedure. With Fotona’s QCW Nd:YAG laser, considered the gold standard in aesthetic surgery, the laser lipolysis procedure does not require the use of a general anesthetic. A very fine laser fiber is inserted into the treatment area, where the laser light causes swelling and rupture of adipocytes. When the fat is melted, it can either be absorbed by the body or removed by the physician. Simultaneously, the laser also tightens the surrounding skin to prevent it from sagging after the removal of unwanted fat. In fact, the same laser can be used for skin tightening, tone and textural improvements elsewhere on the body.

The Clitoral Region

Clitoral cosmetic alterations are primarily focused on the excision of loose and redundant folds of skin from the prepuce. When planning this type of surgery in combination with a mons pubis lift, the lift is done as the first stage because it frequently produces a tightening of the prepuce in the vertical axis when the mons pubis is placed on cephalad traction. Inferior to the prepuce, the trifurcation of the posterolateral portion or the prepuce, the frenulum and the labium minus must be addressed when prepuce alterations and reduction of the labia minora are requested by the patient.

The Labia Minora

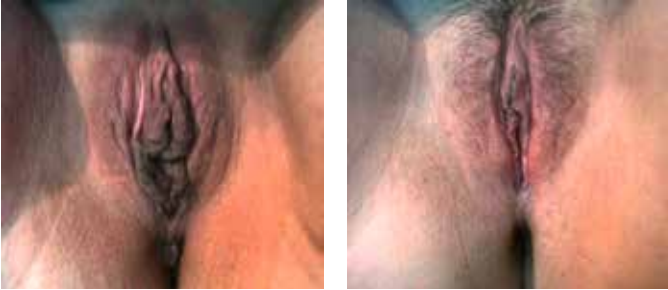
Reduction labiaplasty (removal or the ‘trimming’ of part of the labia) is the most common treatment for

patients unhappy with elongated, asymmetric or hyperpigmented labial tissue. When carrying out an examination of the labia minora, it is necessary to spread them laterally onto the labia majora to determine the degrees of hypertrophy, hyperpigmentation and asymmetry which may be present. When a combination reduction labiaplasty and vaginal tightening procedure is performed, the vaginal tightening is performed initially because it involves the resection of the fourchette with subsequent remodelling in a more anterior position.

Laser tightening with Fotona’s minimally invasive SMOOTH mode does not require any form of anesthesia, with patients just describing a warm sensation.



Before and after labiaplasty. Courtesy Dr. Adrian Gaspar



Before and after labiaplasty. Courtesy Dr. Adrian Gaspar



Before and after vulvar depigmentation. Courtesy Dr. Claudia Pidal

The same laser can be used for skin tightening, tone and textural improvements elsewhere on the body.



The Labia Majora

It is common for the labia majora to lose volume with both age and weight loss giving a deflated appearance with laxity and wrinkling of the overlying skin. In the majority of patients, these changes can be effectively addressed with **autologous fat transfer**. Very similar to fat grafting in facial applications, a sufficient volume of fat is harvested from a suitable site, prepared according to the fat harvesting systems protocol and then re-injected into the subcutaneous fat layer. Deeper injections are avoided as they may affect the structures of the vestibule.

When a larger degree of skin laxity or obvious sagging is present, an ellipsoidal, full thickness **skin resection** along the vertical axis of the labia majora is carried out. This can be done alone or in conjunction with autol-

The biggest breakthrough in recent years is the use of erbium laser in the non-ablative mode to internally tighten the vagina.

ogous fat transfer to provide a very effective cosmetic solution.

With **Er:YAG labiaplasty**, micro-short pulses (MSP) enable cosmetic cuts that are as precise or even more so than those performed with a surgical scalpel. The high repetition rate of the laser pulses leads to complete and nearly simultaneous homeostasis of the cut tissue. Other benefits of laser treatment include simultaneous disinfection, total re-epithelization, less pain and fast wound healing.

Varicose veins of the vulvar region respond very well to laser occlusion (transdermal 1064 nm) or to sclerotherapy in much the same manner as those of the legs. Often these varicosities are the source of pelvic pain and a full gynecological review should be carried out in this case to rule out other etiologies prior to treatment. The veins are usually marked out in the standing position and lasered or injected in the supine position. This technique is the same for any laser vein or sclerotherapy treatment of the leg varicosities working from the proximal to the distal veins. Pelvic compression garments are worn for the first seven days following this type of treatment. ✱

Popular aesthetic and clinical gynecological treatments performed with Er:YAG and Nd:YAG lasers	
Er:YAG (2940 nm) Laser	
Aesthetic gynecology Laser Vaginal Tightening Labiaplasty Vulvar depigmentation	Clinical gynecology Stress Urinary Incontinence Genital Warts (Condylomas) Cervical Dysplasia (HVP) Cervical Ectropion
Benefits of Er:YAG Lasers in Gynecology	
<ul style="list-style-type: none">• Non-contact, non-invasive, high-precision procedures• Little or no pain, many treatments possible without anesthesia• Simultaneous disinfection, total re-epithelization and fast wound healing• Outstanding clinical results	
Nd:YAG (1064 nm) Laser	
Aesthetic gynecology Liposuction of the pubis mound Vulvar Hiar Reduction	Clinical gynecology Lichen Sclerosus et Atrophicus Laparotomy, laparoscopic and hysteroscopic procedures Myomectomy Polycystic Ovarian Syndrom Cervical and Intrauterine Polyps
Benefits of Nd:YAG Lasers in Gynecology	
<ul style="list-style-type: none">• Incision, excision, vaporization and coagulation while submerged under fluid• Easy access to difficult-to-reach locations• Excellent depth-of-penetration control• No tissue charring• Neighboring tissue is preserved• Fast patient recovery with less pain and inflammation	



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 - Fotona Multi-pulse technology
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 - Wide range of additional surgical and aesthetic procedures
 - No consumables



Vaginal rejuvenation

by Tina Torelli / Original article published in Playboy Slovenia



The vagina is one part of the female body that can actually be rejuvenated very effectively. The procedure is performed by using a laser beam, which is particularly efficient for treating moist skin areas. “Everything on a woman’s body, which is not the vagina or its extension, the uterus, is merely for decoration. The vagina is the centre of everything: it not only serves for pleasure, but it also represents a tool of nature in the most primeval sense - for reproduction,” says Sabina Sencar, MD, a gynecologist and a campaigner for basic women’s rights in her profession. As a mother of three children, a wife and a proud woman, she became her own test subject of the laser vaginal rejuvenation procedure. Or, the rejuvenation of her lady flower if that sounds better.

Two in One

This center of everything, which actually makes the (male) world go round, if guys admit it or not, sometimes gives way to a loosening of vaginal tissues. This happens because of sexual activity, age and childbirth. The unpleasant consequences of this natural phenomenon are stress urinary incontinence and decreased sensation during intercourse. Until recently, this was a taboo subject and a serious ordeal for those women who suffered from it. Today, however, these problems are fortunately manageable, largely due to the work of Slovenian scientists. And not only that: the procedure which treats a woman’s incontinence also introduces new joys into her sex life as well. Of course, the opposite also holds true: the procedure for which a woman opted because her sex life is no longer what it was, at the same time prevents stress urinary incontinence. Who’s still saying that life is about suffering? It’s not, or at least it does not have to be.

Dissatisfaction fuels the economy

Sabina Sencar, MD, and her business partner Ursula Bizjak Ogrinc, MD, have performed over a hundred laser vaginal procedures in their clinic on Savska street in Ljubljana. For various reasons and causes, but always with the same double gain: a firmer vaginal wall supports the bladder, and a narrower vagina enables better friction during sexual intercourse, which is of course a prerequisite for enjoyable sex. These liberating treatments in Slovenia are still being conducted at the full financial expense of the client. Although progressive people live here, the country still only supports gadgets and medicines which do not benefit sex, or even reduce libido. But it is generally known that people who are (sexually) unsatisfied lead unhealthier lifestyles and worry about how unhealthy they live, which results in even greater anxiety and illness. Yet it seems that this general dissatisfaction is the cornerstone of the current economy, with unsatisfied people successfully keeping attention away from the real social problems. To achieve happiness and a sense of ecstatic union with people of both genders, we need (also) good quality sex. For women who suffer from the failure of vaginal tissues, the magic of quality sex is brought back by a laser guided by a skillful hand.


The best in the world

Yes, a laser is the basic tool by which the gynecologists perform the treatment. It is a laser made by the Slovenian company Fotona, which develops the most advanced lasers in the world. They certainly do it with a great potency! This has thrust them among the Slovenian inventors of world fame who have cared for and appreciated women, like Peter Florjancic, whose inventions took care of outer beauty (nail polish caps with built-in brushes, perfume spray, cream pots, and electric toothbrushes, for which the world had not yet been prepared). Nowadays the lasers developed by the professionals at Fotona are ensuring that women will also shine from the inside out.

Vaginal autonomy

Fotona’s story begins in the year 1964. As it all too often happens in this world, their lasers were first used for





The interesting thing about this method is that the discovery was made as a side effect of an aesthetic surgery; in South America they were the first to find out that after this procedure, women ceased to be incontinent.

military purposes, then industrial, and finally for medical purposes. But in this case, luckily, the story went in the right direction, in the direction of love. Fotona lasers are used in many branches of medicine and cosmetics, but here we are primarily interested in two applications: the first variation, IncontiLase® is intended for the treatment of stress and partly of mixed incontinence, while the second, IntimaLase®, is intended primarily for vaginal tightening, which may be considered after delivery or when the failure of vaginal connective tissue occurs as a natural consequence of aging. Yes, vaginas unfortunately grow old with their owners, but the owners now have the opportunity to manage the time on their own.

Not everything is relative, the measures are exact

In the evening before my research visit to Fotona, I got together with my friends, and after discussing the fact that a vaginal laser treatment can also be a matter of mere 'cosmetics', a lively debate ensued. Should the woman be the one to undergo an operation if the sex is very lame, or very unsatisfactory due to the incompatibility between the partners? Is it my lady parts that are too wide, because I am not 17 anymore, or did he really appear bigger to me in the past? What if we are just not suited for each other? Maybe my lack of interest in sex is more related to the lack of love than to incompatible body dimensions? And if I decide to undergo the procedure, who suffers the pain, and who enjoys the gain? A suspicion also arose that women are sent to this procedure by men, who are influenced by pornography, which strays back to the anal phase and its (narrow) dimensions (I'll extensively elaborate on this at some other time).

At Fotona

I was received by Masa Gorsic, PhD, the Program Manager and Director of LA&HA, the Laser and Health Academy and Vlaho Krisper, the manager who is responsible for the spread of Fotona's network around the globe. First, we watched a promotional film about the procedure, which mostly appears to be good news: no anesthesia, no pain, no blood and no stitches. No middle ages. The research results are also very impressive: 95 percent of women reported a moderate-to-strong improvement of their situation, the average narrowing of the vagina is 17 per cent, and no harmful side effects or complications have yet been recorded, although more than 1500 tests have already been performed.

Just a fashion fad?

Laser vaginal rejuvenation could be a fad. Certainly not a seriously detrimental one, since the procedure is, as emphasized by Vlaho Krisper (and as I witnessed myself), a walk-in/walk-out procedure. Besides, Fotona is currently in possession of certainly the most effective and non-invasive laser in the world. Dr. Gorsic added that the woman can, of course, also opt for the procedure for the desire to have better sex, although the treatment per se does not promise that. But such cases are rare. Women generally opt for the treatment due to serious problems, stress or mixed incontinence, which can be quite successfully cured by the IncontiLase® procedure, at least in the initial stages. When atrophy of vaginal tissue occurs, which is reflected as a decreased sensation during sexual intercourse, we use the IntimaLase® procedure, which is slightly different from the above-mentioned method, to influence the entire vagina. It is important to acknowledge that the IntimaLase procedure is not omnipotent – it will not increase your partner's size, it will not improve his technique and it probably will not solve a crisis in the relationship or any psychological problems with sex. However, it is true that a tighter vagina boosts self-confidence at least a bit. It is also true that if one has never experienced multiple orgasms, it is unlikely that this will be possible after thermal stimulation of collagen fibers.

Instant effect

"In the best possible scenario, the vagina can return to the condition that it was in before the patient was sexually active, but it is quite impossible to tighten it even more," Dr. Gorsic replied to my question about whether the effect of the intervention can be too strong. "The laser only heats tissue with a specific modality. The laser pulse is very long and penetrates only four micrometres deep into the tissue. The operating temperature is 63 degrees Celsius, which sounds like a lot, but it is not, since wet tissue absorbs the laser beam differently than normal skin. The procedure is painless and does not cause burns. Usually, it is repeated twice, and the effects certainly last at least for a year and a half, which is also the time for how long our process has been in use. Of course, it is logical to expect that the effect will eventually diminish,

because the procedure does not stop the deterioration of collagen fibers. Aging is inevitable, and the effect of the procedure is strongly dependent on the patient's age, the degree of incontinence, and the degree of atrophy of the tissues. After the treatment we prescribe a few weeks of abstinence, but the effects are immediate. We also use the laser at the vaginal orifice and the perineum to strengthen them as well," added Dr. Gorsic, who then referred me to Dr. Sabina Sencar.

Internal beauty treatment

We met with Dr. Sabina Sencar for a cup of coffee in the building where her office is located on Savska street (meanwhile, her partner Dr. Bizjak Ogrinc worked in the clinic a floor higher), and an interesting debate about women's inner beauty developed. Sabina was the first gynecologist in Slovenia who was daring enough to use the Fotona laser. "I'm glad that we finally began to speak out loud about it. Why would women have to be satisfied with just anything? There are things that only we, the gynecologists, hear about. People still have that old mentality that life is not strewn with roses, and you have to suffer, but this is not necessarily true. Plastic surgeons have aesthetic norms, we have functional norms. For example, when talking about the labia, the aesthetic ideal means one thing, Barbie, and functionality means something else. The labia can actually be too big and can interfere with your daily life, even when you sit on a bike. If they are pulled into the vagina during every intercourse, it hurts. Gynecologists actually started with medical interventions for intimate parts from a functional point of view. Fortunately, the inner beauty always shines through on the outside. If you ask me, sex is good if you are internally connected with yourself, otherwise it's not," Dr. Sencar explained in a manifesto against the suffering of women.

A reproducible method

Of course I was interested in the advantages of the Fotona laser. "If anyone wanted to fix their vagina the old way, I would probably discourage it," said Dr. Sencar. "The latest developments are going in the direction of non-invasive methods, which do not present the traditional surgical risks and complications. Until recently, the procedure in the vagina was a one-time, irreversible surgery. Part of the tissue was removed. Today, the tissue is shrunk, just like with an aesthetic lifting, only that the lining of the vagina is an even better area for such a procedure since the laser light is most efficiently absorbed in wet tissues. When a piece of tissue is cut off, the effect is instantaneous, but it still means something was cut off. If the tissue is treated thermally, if you manipulate the contraction of the patient's own tissues and collagen synthesis, you don't do any harm. This method is easily reproducible. Medicine needs to go in that direction, and when it comes to the vagina, it is even more important that the method is reproducible. Although nothing is forever, because we are not forever either, the fact that

you can solve your problem of stress urinary incontinence for a few years, is still great news. The interesting thing about this method is that the discovery was made as a side effect of an aesthetic surgery; in South America they were the first to find out that after this procedure, women ceased to be incontinent. We, the gynecologists, of course focused on the last piece of information and are continuing from there on.” I was wondering about the current percentage of candidates for laser vaginal treatment who are not incontinent, but would like to improve their sex life. The numbers are still very low because Slovenia is not South America.

You have to have balls (or eggs?)

In order to go with something so very new, do you have to be brave or crazy? “You have to believe in it. You have to believe that there is something substantial behind it, and even more so, you have to feel that there is a demand for it; my business partner and I did feel it. Before we got the first laser here, they had already performed this kind of procedure in Zagreb. Of course, I tried it out myself as well. I have given birth three times, and in a marriage with three kids you have to invest even more effort in a good relationship with your husband, right?” I don’t know about that, but the stories about loose vaginas and serious degree of incontinence even among young women are no fairy tales.

“Fortunately, the vagina is a super-connective structure with excellent abilities to restore its elasticity, but only up to a limit. It’s like the elastic on a pair of shorts – if you keep stretching it, it eventually becomes loose. We are also being told to do Kegel exercises – they help, but they do not solve the problem completely. The muscular floor is small and the muscles are present just at the bottom of the pelvis, and the vagina does not have muscles, only its entry can be squeezed, while the vagina itself, consisting only of elastic and connective tissues, cannot contract. The laser strengthens the connective tissue. Stress urinary incontinence is defined by the loss of anatomical support to the bladder and urethra. Of course, as with any other operative procedure available to eliminate stress urinary incontinence, we do not repair the muscles. When it comes to stress urinary incontinence, the old method of support is given from the outside: a tape is attached to the urethra and at the bladder base so that it can retain urine, while with the laser we augment the body’s own support. In the case of young women, this is all the more important because they are sexually active, and inserting a mesh is not in favor of better sex.”

Will the husband be pleased?

“This is what my patients ask me, and I reply that he will be pleased for sure, but the patient herself will be even more satisfied. In terms of nature, women compete against other women. A man is certainly more satisfied with sex if the vagina

is narrower, but by undergoing the laser procedure a woman actually helps herself. It is true that sex and desire start in the mind, but a quality intercourse is not possible without sufficient friction. It begins in your head, but it is also necessary to come (to an end). The laser has greatly facilitated my work because it is the primary task of every physician to improve the patient’s quality of life. Every new method is in a critical phase for some time. When they invented the first ultrasound and brought it to a clinic, everybody laughed, but now we cannot imagine medicine without it. Someone had to be the first to believe in the device. We do not know what will happen in ten years – probably there will be an even better method, but for now, this one is optimal. Life is too short to not live every day to the fullest.”

Possible health hazards

Dr. Sencar explained to me why with this procedure does not present any risk for my health. Since the procedure is relatively new, those conducting it are very careful with it. The laser energy stays within the so-called safe zone, and therefore the results are less dramatic than they will be later, when the very upper limit of safe laser energy application will be defined. Finally, the laser’s light is only a small part of the full light spectrum, a single wavelength. The sun is much more dangerous, because it emits a whole spectrum of wavelengths. Far more hazardous for health is dissatisfaction. Dr. Sencar and I both agree that no woman should walk around with pads because of incontinence, and nobody believes that a woman’s life should stop after 50. It is also true that men do not necessarily cheat with younger and more beautiful women, but almost certainly with those who are more cheerful and willing. “Men prefer normal women who love life,” added Dr. Sencar. ✱

Dr. Sencar: “The laser has greatly facilitated my work because it is the primary task of every physician to improve the patient’s quality of life.”



Testimonials

Women don't talk about it, even to their doctors!

An interview with the actress Zvezdana Mlakar **by Mateja Princic**

Until recently, a famous Slovenian actress, Zvezdana Mlakar, was one of approximately 70 percent of women in menopause who suffer from stress urinary incontinence. But in the spring of 2012 she decided to have the problem treated with a laser, and to speak publicly about the procedure and her satisfaction with it, thus helping to break one of the most common female taboos.

How satisfied are you with the results of your laser treatment? Do problems with urine leaks still occur occasionally?

Mlakar: I am very pleased that I no longer have any problems, and I still cannot believe it is true! I still expect the dribbles. When I was hopping around the other day during my training, I felt that primal fear and thought, 'oops, now I'll have to stop and ask for a break to use the toilet'. But luckily that wasn't necessary, and as I finished that exercise it warmed the cockles of my heart. It really is over. I think of all the women who have had even greater trouble than I have; if they underwent the procedure, they could now peacefully and without shame hike, travel, jump, cough and sneeze. I'm happy to live in a time when science is so advanced that it can really help – without major complications, surgery and adverse events.

How long have you had problems with leaking?

Mlakar: I'm 55 now, and it started 5 years ago. It hit me completely off guard. At first I thought, oh well, it's just a small accident. But when I started to train intensively, the problem revealed itself in all its dimensions. At that time, it dribbled during any major effort. I kept emptying my bladder, and I started to feel a bit embarrassed. Of course I wouldn't tell anyone, not even in my dreams. It was especially very annoying in the theater during a play, since after the play, the wardrobe assistants would wash our underwear, socks, etc. but I preferred to clean everything by myself.

As an actress, how did you face the difficulties? Did it hamper you significantly on the stage?

Mlakar: In every play, whenever there was a scene with screaming and intense strain, I began to drip constantly, so I started to wear protection. And for at least 2 hours before the show I refrained from drinking anything. It wasn't noticeable but I felt uncomfortable because I was constantly afraid that it would just burst. It's scary, you never know what to expect. Then I became a little more wary of all my older colleagues who always went to the loo before the show just like me, until one of them laughed and said that she always has to pee before the show so that she doesn't flood the stage.

I consider myself to be an educated and well-informed woman, but I've never heard anyone talk out loud about this issue, so after this event I mustered up the courage to talk about this with my gynecologist. Laughingly, he told me that I had entered menopause. I was stricken by the hushed-up diagnosis, full of prejudices – I was in menopause. As if that was not enough, I ended up among the numerous women who suffer from stress incontinence. I started with hormone therapy. My gynecologist prescribed the use of plugs every other night to help me with the leakage, and I was intensively doing Kegel exercises. In the beginning it seemed OK, but after a couple of months the hormone therapy, the plugs, and Kegel exercises were no longer of much help.

When did the situation become unbearable?

Mlakar: Over time the dribbles spill over onto everything that you do in your life. They occur each time you exert yourself, sneeze, cough, jump, and you can not hold it for very long, so you become very familiar with the toilet. You control how much you drink before any important event.

When did it present the biggest problem for me? I can only say that every drop which escapes uncontrollably seems a big problem to me. Because of the fact that I could not control my bodily functions, I felt humiliated, embarrassed, and frightened, because I always feared the odor. I was afraid that someone would suddenly say, "What's that smell? Oh, look at her, she peed on herself."



You spoke about incontinence, which is still a taboo topic in our country in the media. Why did you decide to do it and how did the people close to you react?

Mlakar: My grandmother had a similar, but far more serious problem. My mom told me how she had to have her slipped uterus replaced back where it belonged, and that she could no longer control her urine. Terrified by the thought that the same thing might happen to her, at the earliest opportunity, my mother agreed to have her uterus cut out and her bladder reattached. My problems foretold a similar story, but we women have never spoken about it aloud.

When I found out that laser surgery is a simple way to eliminate stress incontinence without any pain or side effects, I immediately decided for it. When all my problems were gone after a week, I decided to speak aloud about this because of my grandmother, my mother, and all the other women who remain silent and allow themselves to have their wombs cut out, even if it's not necessary, and also because of the silence around this issue, the second-class treatment of this problem, which traps women between four walls, and takes away their human dignity and self-esteem. I received countless letters from sad, ashamed women who dare not travel or go to the theater, who spend a lot of money for diapers, which completely dehumanizes them. And they say nothing about this even to their doctors!

Even my family was unaware of my problem. When they found out about it, they were surprised that it existed at all, and they accepted the laser procedure as something normal, something I did for myself, my health and well-being.

When vaginal rejuvenation was mentioned in public, did many prejudices spring up?

Mlakar: When my doctor Sabina Sencar explained to me that the laser surgery will not only eliminate the problems with incontinence, but also give me the 'gift' of a rejuvenated vagina, I thought that was great. I was more focused on the fantastic laser technology and on what it can do, how the laser works to rejuvenate the skin, and how easy it is to eliminate that annoying fungus on toenails, but I had no idea that my rejuvenated vagina would stir up so much attention and almost overshadow the essence of the procedure – the elimination of stress incontinence.

My wise mom warned me about this and asked me to be silent about it. I was a bit disappointed because the purpose of my public presentation was to spread the information so women would learn about this wonderful opportunity. The fact that it was precisely the female editors and journalists who reacted in the most ridiculous way gave me the impression that women are relatively immature and should blame themselves for being treated as "second-class beings." Now I sincerely wish that they invented such a laser that would destroy such wicked, foolish thoughts, full of prejudices.

Is it actually true that the procedure also improves one's sex life?

Mlakar: In our society it is still unacceptable to speak about the sexual life of decent women, especially about the sexual life of mature, older women! A mature woman should be "swept into the dustbin of history", she can baby-sit the grandchildren, bake cakes and humbly drag herself towards the end of her life. To enjoy herself – outrageous. Quietly, however, women ask themselves about it. Even the family physician! "You know," she said, "I am interested because of my female patients" while her eyes were shining mischievously.

Some other lady told me that she would undergo the vaginal rejuvenation procedure for her husband. That he enjoyed it more?! My physician and I giggle because we know that these curious women will soon catch on to our pleasure, since this gift is intended for them as well: confident, happy women who want to live a full and quality life.

So what do you advise to women with similar problems?

Mlakar: To take their lives in their hands and find a doctor who will treat their stress incontinence in this way with a laser treatment, and to also help other women to no longer be like little embarrassed girls who pee on themselves, but to reclaim their image of a grown-up, confident and strong woman. No matter if she is 100 years old! ✱

IncontiLase® and IntimaLase® patient

testimonials from around the globe

Manja, 44 years old, Europe:

“As a mother of three, two of my deliveries were very difficult, assisted with a vacuum. My troubles with incontinence started three years ago, one year after the birth of my last child. A couple of years ago I started running to relax from work stress, and that is when the troubles really started. Whenever I didn’t have a completely empty bladder, I began leaking, so I decided to start wearing pads.

I talked to my friends and many also complained about this problem, so I came to terms with it for some time. But it was bothering me more and more. I knew that there were some drastic treatment options such as surgery, but I chose not to even think about it. A year ago I read an article about a non-invasive laser treatment and became curious. I contacted a doctor to find out more about it. The non-invasiveness of the procedure persuaded me and I decided to try it. After one treatment I didn’t have to wear pads any more. After the second treatment, I was completely dry and an infection that had previously bothered me was now gone. But not only that, I also discovered that sensations during sexual intercourse became much more intense than before.

I was so happy with the procedure that I decided to speak publicly about it so that other women with the same problem will know that there are some excellent new solutions for incontinence available.”

Irena, 33 years old, Europe:

“Since I was always an active type I wanted to maintain the same lifestyle after two deliveries. I play tennis and run a lot. Due to leakage of urine, I used to wear pads day and night. I was diagnosed with stress urinary incontinence, but by any standards my problem is not adequate for an operation. Kegel exercises, despite consistency, did not help. I read about the laser therapy in a women’s magazine. Six weeks after the procedure I was completely dry. Summer is coming and I cannot believe I have freed myself from the eternal pads!”

Vera, 79 years old, Europe:

“Despite my age and the many medicines I take, I am not written off. I love to travel with my husband, so leakage of urine bothers me. I was even signed up for the TVT operation, but because of my hip, knee and anticoagulant therapy they often rescheduled the surgery. In the meantime I found out about the laser intervention for urinary incontinence. Two months after the procedure, I feel great improvement. During a strong sneeze I still leak a few drops of urine, but otherwise not.”

Brenda, 59 years old, North America:

“I had a mild problem with leaking urine and I’ve experienced a decline in libido. Six months ago I had laser treatment for vaginal laxity. I was surprised at how quick and painless the procedure was. Moreover, I noticed the difference immediately as I walked around town and went to lunch! After the surgery, I was advised to abstain from sexual intercourse for two weeks. Waiting has paid off! My libido and sensation during intercourse have been restored in a sense that is better than ever. Even orgasms are stronger and longer. The problem with urine leakage has completely disappeared.”

Maria, 34 years old, South America

“My experience was 100% positive. My partner also felt the difference, and both of us are very happy with the results. I had no pain during the 15-minute procedure and I felt no discomfort after it. The change was very noticeable. I was narrower, I felt more pleasure when having sex and orgasms improved, more intense and better in quality than before. My partner commented: ‘Why didn’t you do this before?’ I’ve mentioned it to all my friends because the results are great and the effect has lasted. They shouldn’t be scared. They should try it because the improvement is significant.”

Florencia, 52 years old, South America

“Before I had the procedure I had problems with flaccidity. It wasn’t the same anymore. Then vaginal tightening was recommended. I did it, and after that, all was good, in fact, perfect. I did this with Dr. Gaviria. At first I was a little scared, but they did my tightening and I felt very well. There was no discomfort, I only felt heat, just a little heat, nothing else.

I had a great experience since it’s made me feel better in my sexuality. More satisfaction, better orgasms. My partner said: ‘What did you do?’ So I explained to him about vaginal tightening and he said: ‘Well, that’s good, this was really great.’ The effects have lasted. I told my friends that I did a vaginal tightening, that I felt wonderful and that my sexual life has changed a lot and that everything has been great. Then they asked me how this was possible. I explained it to them and they said: ‘I’m going to get a vaginal tightening. I want to have that.’

Lucia, 46 years old, South America:

“The reason to perform the procedure was to improve the physical appearance of my genitals and to improve my sexual life after having two children and aging. I’m already 46 years old and this was an important reason for me to improve the quality of my sexual life. I always thought that my genitals were different from the rest and that they were ugly and different, so when I learned that vaginal reconstruction existed in my area, I decided to make an appointment.

My partner and I, after we had the procedure (because this was an issue for both of us), agree that it was wonderful. It’s like having your vagina as if you didn’t have children, as if you had no

sexual relations. It’s like the first time – you feel more pleasure, more friction, greater orgasms, more intense, both for him and for me. It’s like we are again together for the first time again, experiencing better sensations.

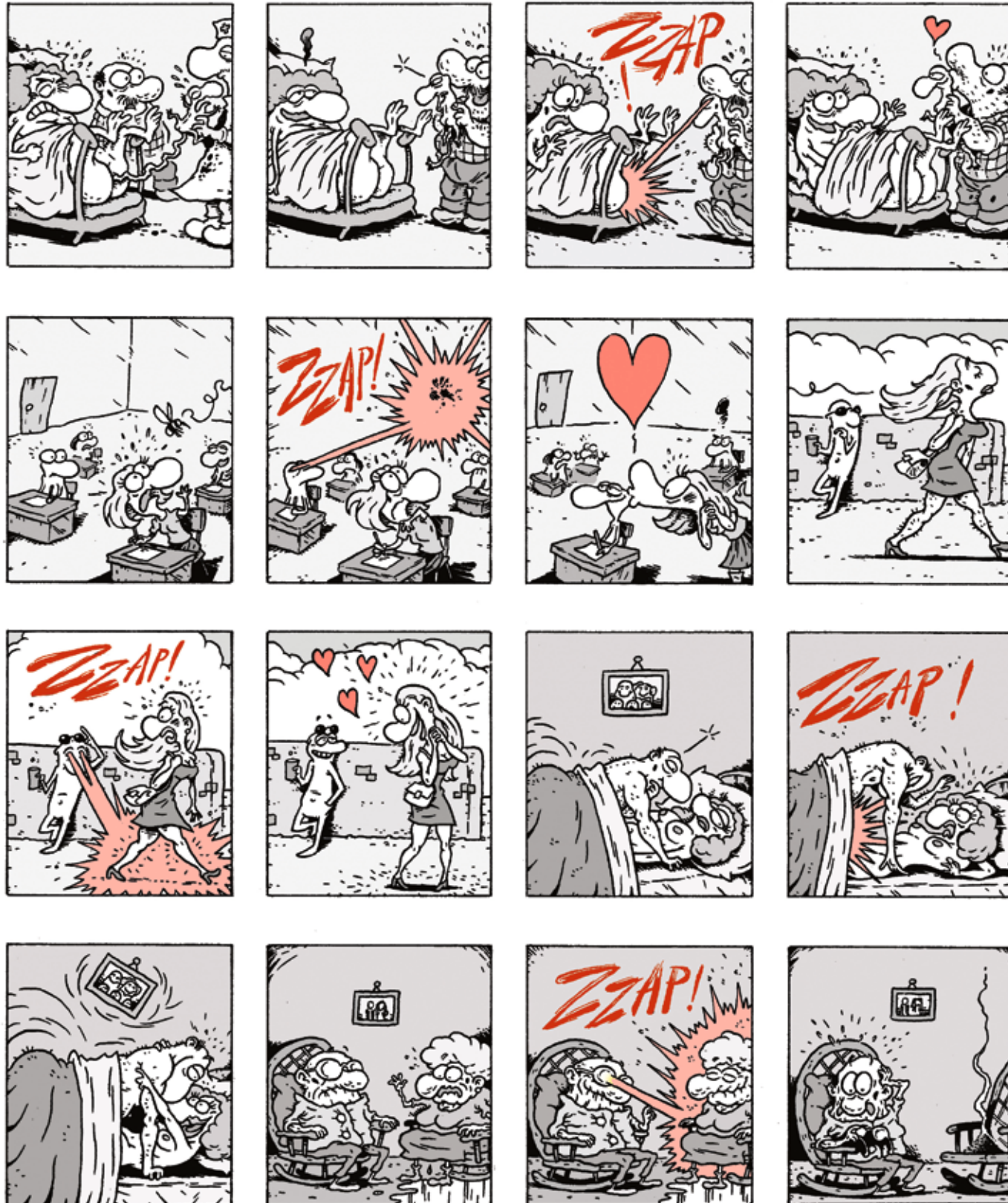
More self-assurance, better self-esteem, you don’t have that concern of being fully naked in front of your partner, with no taboos, but the contrary – more sure of myself like it was the first time. With the passage of time our relationship has kept improving, enjoying more and more the physical aspect as well as the intensity, and regarding sensations, there is more friction and we keep having a better quality of sexual life. Better orgasms, much, much better orgasms. I’ve mentioned this treatment to all my friends and all of them are willing to have the procedure because they think it’s marvelous based on my experience, so all of them want to have that sensation. Performing this treatment improves our self-esteem and sex with our partners, since it’s like starting again with our partner, more confident, with more experience – like having sex, with experience and with a new vagina!” ✱



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