PROCTO COM™

3rd biolitec laser summit for proctology

Dubai 2024 – In a nutshell

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Index

Dubai 2024

Dr. Samy Abdelsattar

Consultant (General, Laser and Laparoscopic Surgery)
Center for minimally invasive proctology and laser surgery

Laser Management of Anal fissures, the new kid on the block

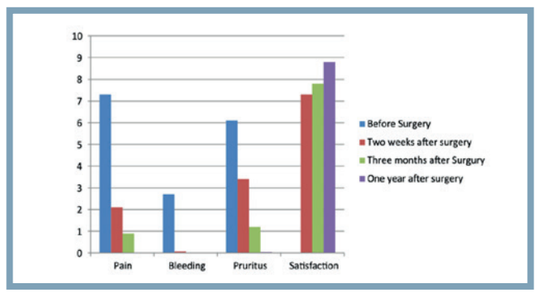
Laser treatment for anal fissures has diverse advantages. It is an outpatient procedure, without post-operative dressing. Maximum pain relief is obtained in the first 48 hours. It also is safe for CABG (heart surgery) patients. The risk of infections and post-operative bleeding is minimal, and there is no risk of incontinence. Dr Abdelsattar gives the following treatment recommendations. It should only be performed by a laser-experienced proctologist with a large volume of patients. The operation should be performed in general or spinal anesthesia. In rare selected cases, local anesthesia can be used with a special, low diameter conic anoscope. The LEONARDO® diode laser (wavelength 1470 nm) is used with the suitable bare fiber or the LOMA handpiece (all by biolitec). The power setting is 8-10W cw. All laser application is performed in a non-contact mode.

Depending on their size existing anal papillae are destructed via contactless irradiation. The fissure ulcer is contactlessly irradiated. Depending on the size of the fissure, around 150-400 joules are applied. Concerning duration, strength and distance of the laser application, depth and surface effects must be considered. Dr Abdelsattar further states that he, instead of a sphincterotomy, makes a small puncture using a laser catheter in the 3 o'clock lithotomy position laterally on the anoderm and then a sphincterolysis is performed. In cases associated with a sentinel tag, the abnormal tissue was removed by laser in continuous mode with radiation power of 10-12 W.

Between September 2022 and February 2023, a study was carried out based on 15 (60%) male and 10 (40%) female patients aged 20-75 years, who were clinically diagnosed with chronic anal fissure. Rectal examination was done to palpate for the presence of spasm and tenderness and to recognize the presence and position of linear ulcer by the surgeon. A detailed history especially about symptoms of anal fissure including anal pain during and after defecation, bleeding, discharge, itching and the duration of these symptoms was gathered from the patients. They were included in the study after signing an informed written consent. Presenting complaints in these patients were painful defecation and constipation in all. Some patients were affected by bleeding per rectum, discharge per rectum, sentinel tag and pruritus. 20 (80%) participating patients had posterior midline fissure and 5 (20%) had anterior midline fissure. Patients left the hospital on the same day, and the treatment took only a few minutes to max. 20 minutes, depending on the condition being treated.

Patients were able to return to normal activity within 1 to 2 days after the surgery. The recovery time depended on how much was done during the procedure, but all patients' fissures healed after 2 to 3 weeks. A few patients had some neglectable bleeding for 4 to 5 days after the laser surgery. In patients with anal itching before surgery, pruritus decreased afterwards. After treatment, the pain score decreased from more than 7 (before treatment) to 1-3 out of 10 (see graph below). Pain was controlled only by acetaminophen (Paracetamol) or celecoxib, whereas one patient had 2 months of pain in the sphincter relaxation area. The mean for patients' satisfaction about this new procedure was about 90%; 4 patients were completely satisfied, 13 patients graded 9 out of 10, and others scored 8 or 7 out of 10 in this study.

This surgical method was found to be a successful, easy and quick way of treating anal fissure.
The benefits of laser therapy include effective resolution of all clinical symptoms, decreased recovery time and minimal risks of side effects.



Dr. Ibrahim Gamal

Consultant General Surgery
Burjeel Hospital, Abu Dhabi, UAE

Recent Update & Management of Anal Fissures, Quo Vadis

Dr. Ibrahim Gamal gave an overview of the treatment options available for anal fissures, with a focus on minimally invasive laser treatment using the so called **LaFiP (Laser assisted Fissureplasty)**. Anal fissures are painful, linear or spindle shaped, longitudinal defect in the highly sensitive anoderm between the pectinate line and the anal verge, from which about 10% of proctology patients suffer. Possible causes include chronic constipation and straining, obstructed defecation syndrome, hard stool chronic diarrhea, childbirth or trauma. Symptoms are anorectal pain during defecation, anal bleeding after defecation, fresh anal bleeding, anal pruritus and anal muscle spasms.

All age groups are affected, with peaks occurring in the 30-to-50-year age group. As far as localization is concerned, around 85% of anal fissures are posterior and 15% anterior. Women and men are almost equally affected. As far as tonicity is concerned, hypertonicity and high pressure fissures are particularly common. Low pressure fissures occur mainly in women and in connection with secondary fissures. Anal fissures can be divided into acute (lasting less than 6 weeks) and chronic (more than 6 weeks) anal fissures, although there is some variance in the definition of chronic fissures.

Four grades of anal fissures are distinguished. In the case of grade 1 fissures, the fibers of the internal anal sphincter muscle are not visible. Grade 2 fissures are deeper fissures, where the fibers of the internal anal sphincter muscle are visible. Grade 3 shows deep, undermined fissure edges. Grade 4 are fissures with marginal fistula. For acute anal fissures, the first choice of treatment is conservative methods, such as lifestyle and dietary changes, as well as medicinal options. For chronic non-healing fissures surgical intervention is indicated using lateral internal sphincterotomy (depending on the country), fissurectomy or anoplasty. Possible complications of the first two methods are incontinence and a longer healing process.

Method of choice for avoiding surgical complications is minimally invasive surgery with the options of laser, botulinum toxin and PRP (platelet-rich plasma). Botulinum toxin is only indicated for hypertonic anal fissures, either alone or in combination with laser, PRP or even surgery. Compared to surgery, laser offers the advantages of short operation and recovery times, less pain, less invasion, less bleeding and minimal risk of incontinence. Laser is a successful, easy and quick way of treating anal fissure and to effectively improve anal fissure symptoms.

The evaluation of the anal canal is done with a Parks retractor/ anoscope after digital examination. For good control of penetration depth, a 1470nm diode laser with 5-12W is used contactless in a distance of 4-20 mm. Advantages of the wavelength 1470 nm are the high absorption in water; a thermal damage of 1-2mm and a good balance of precision and coagulation. Used is either a bare fiber or the LOMA handpiece with total energies of around 100-400 joules, depending on size of the ulcus and involvement of sentinal pile and outpost fold. The beam is then used to remove/take off the anal papilla, coagulate the fissure ulcer and excise the sentinel tag.

LaFiP (Laser assisted Fissureplasty) has benefits compared to surgery and diathermy as it enables flexible and precise tissue dissolving by superficial laser action. As it works "scalpel-free" it can be considered of as "fissurectomy without excision". The sphincter function is protected and there is no bleeding or gutter formation. As no electric current flows laser treatment is also less painful than mono-electro surgery. The LaFiP is a well feasible minimally invasive option for the surgical treatment of chronic anal fissure with effective pain reduction and low complication rate. The combination with further laser interventions has no influence on the operative and postoperative parameters and therefore allows a simultaneous laser therapy of different anal disease entities without disadvantages for the patient.

Dr. Juan Diego Pina Hernandez

Cirujano general y digestivo (General and digestive Surgeon)
HU Ramón y Cajal, Madrid
Unidad de trasplante hepático
Cirujano Grupo Jaén

Dr. Juan Diego Pina Hernandez's Study on Anal Fistula Management Using the FiLaC® Method: Eight Years of Insights

Dr. Pina Hernandez, based in Madrid, Spain, presented the findings of his eight-year study on managing anal fistulas using the FiLaC (Fistula Laser Closure) method. His presentation emphasized the lessons learned over the years, with a special focus on the role of the glandular structure and its anal duct in the disease. He also showcased complex cases accompanied by treatment videos.

The study analyzed data from 200 patients who underwent treatment for intersphincteric (25%), transsphincteric (65%), and suprasphincteric fistulas (10%). Patients with acute abscesses and secondary tracts were excluded from the study. The average age of participants was 51 years, with a male-to-female distribution of 56% to 44%. Notably, 83% of the patients were smokers, and 16% were diagnosed with Crohn's disease.

A crucial commonality among the patients was that all had undergone previous seton drainage for a minimum of eight weeks. Diagnostic tools such as endorectal ultrasound or MRI were used to evaluate the condition. One key decision in the procedure involved whether to close the internal opening of the fistula. Dr. Pina Hernandez explained that he made this decision on a case-by-case basis, guided by the shape and condition (e.g., diameter size) of the internal opening, often opting for simple suture closure.

Despite 45% of the patients having undergone previous surgeries, the FiLaC method achieved an overall success rate of 72%, with a remarkable success rate of 70% even among patients with Crohn's disease. Minor complications, such as slight bleeding and temporary soiling, were observed in only 12% of the cases. Importantly, no cases of fecal incontinence were reported, underscoring the minimally invasive nature of the laser treatment.

Dr. Pina Hernandez highlighted another significant finding: 40% of the non-successful treatments led to a more superficial fistula course, enabling less invasive fistulotomy options for these patients.

Conclusion
Dr. Pina Hernandez summarized his findings with the following key points:

- The FiLaC technique is safe.
- Mastery of the technique is essential.
- It achieves a high success rate.
- Complication rates are minimal.
- It serves as an excellent first-line treatment.
- This study affirms the efficacy and safety of the FiLaC method as a minimally invasive solution for anal fistula management.

Dr. Hashim Alqazweeni

Senior consultant
Mubarak Alkabeer Hospital, Kuwait

FiLaC® Indications , Tips and Tricks

FiLaC® is one of the Novel techniques for treatment of fistula-in-ano initially described by Wilhelm et al in 2011. It is one of the Sphincter preserving techniques using Diode laser and a radial emitting laser probe (FiLaC®, biolitec®, Germany). The treatment works by destroying all of the epithelial lining of the fistula by radial (360°) laser application and simultaneously ablating the track and shrinking without traumatizing the sphincter muscles and the perianal skin.

Indications for FiLaC® are complex fistulas, high trans-sphincteric, supra sphincteric and multiple fistulas, recurrent fistulas or fistulas requiring multiple operation, CD fistula as well as simple fistulas at risk of fecal or flatal incontinence. Contraindications for FiLaC® are simple low anal (<3cm), presence of abscess or bleeding as well as branching fistula.

Fistula diagnostics is based on history, physical examination, TRUS and MRI fistullogram (gold standard). The St. James University Hospital MRI Classification System classifies fistulas by grades. Grade 0 are fistulas of normal appearance; grade 1 are simple linear intersphincteric fistula; grade 2 are intersphincteric fistula with a secondary fistula track / an abscess; grade 3 are transsphincteric fistula; grade 4 are transsphincteric fistula with abscess or secondary track within the ischioanal or ischiorectal fossa and grade 5 refers to supralevator and translevator disease. Parks Classification of perianal fistula (pf) distinguishes intersphincteric fistulas (confined to intersphincteric plane, does not cross external sphincter or levator muscles), transsphincteric fistulas (track passes radially through external sphincter), suprasphincteric fistula (track passes upward within intersphincteric plane over puborectalis muscles and descends though levator muscles, ischiorectal fosse) as well as extrasphincteric fistulas (the course of the fistula is completely outside external sphincter).

A seton can be used for 6-8 weeks to provide continuous drainage, as well as to manage and control sepsis. It can also be conducive in cases of swollen fistula, for homogenization of diameter and good epithelization of the fistula tract. It also can facilitate the laser probe insertion (when using a hollow seton). In cases of Crohn's disease, a Seton is placed first, followed by the biological treatment to subside the active disease. Concerning closure of the inner opening: If it is large, it should be closed. If it is small (size of laser fiber tip) it can be left open. In case of a scarred external opening, excision should be considered. During the treatment it has to be decided, whether curette of the tract or irrigation is done. The laser procedure is done with power of 12-13 watt. The probe is inserted until the internal opening is reached. Then the probe is withdrawn at a rate of 1mm/second. Use 100 to 120 Joule of energy for each 10mm. Closure of the internal opening is done via figure 8 stitch. In cases of scarred external openings excision is done.

Almost all available studies found that the use of laser energy at wavelength 1470 nm is efficient for local tissue shrinkage and protein denaturation. This is achieved by the absorption of laser energy in tissue water which causes the destruction of the granulation and the epithelial tissue. The radial (360°) lateral effect is limited to a zone of 2-3 mm. The laser must be adjusted to 12-13 Watt and 100-120J/cm to minimize collateral thermal damage of the surrounding tissue. Most studies found primary healing rates of 55.6% - 70% and secondary healing rates of 88%-92%, whereas the healing rate is affected by the length of the tract. The longer the tract, the better the shrinkage, and the shorter the tract, the better the healing. Healing is found to be better if the tract is not wider than 4-5 mm. In the view of Dr. Alqazweeni Fistula Laser Closure is a very promising Sphincter sparing method with very few complications.

Prof. Dr. Peter C. Ambe

M.D, MBA, FEBS. Professor of Surgery, Colorectal, GI, Oncologic and Minimally Invasive Surgery.
Witten / Herdecke University, Germany

Best Clinical Practice Recommendations for fistula tract laser closure: **the FiLaC® recommendation**

In his presentation "Best Clinical Practice Recommendations for fistula tract laser closure: the FiLaC® recommendation" Prof. Dr. Ambe explained the advantages of FiLaC® for the treatment of anal fistula. Under reference to Frountzas et al.: "Could FiLaC® be effective in the treatment of anal fistulas? A systematic review of observational studies and proportional meta-analysis" Ambe refers to the suitability of FiLaC® for simple fistula with intersphincteric tracks or single low transsphincteric tracks that cross less than 30% of the external sphincter. FiLaC® is a treatment option for fistulas of Grade 2C. Also concerning complex fistula, i.e. high transsphincteric, suprasphincteric, extrasphincteric, recurrent, horseshoe fistulas with multiple tracks, anteriorly lying tracks in females and high risk of incontinence, FiLaC® is amongst the treatment options of fistulas of Grade 2C.

As far as energy and wavelength is concerned, the energy used in the studies reviewed varied between 10 and 15 W. In most cases a wavelength of 1470 nm was used. Ambe emphasized that the amount of laser energy used during FiLaC® is a relevant determinant of surgical outcome.

The primary healing rates found in the studies reviewed varied between 33.33% and 89.02%. In most studies listed, they were in the range of above two-thirds. The same applies to overall success by FiLaC®, which according to one study even reached 92.59%.

Concerning recommendations for sphincter-preserving procedures, laser ablation of fistula tract can be considered in patients with a high anal fistula, whereas the evidence level is very low. Repetition can be considered in patients following primary failure from the first attempt. However, repeat procedures should be undertaken with caution, as the cumulative effect of laser use on the sphincter complex is unknown. The evidence level is also very low.

Ambe addresses the list of questions relevant to the inclusion of FiLaC® in the list of recommended procedures for the treatment of anal fistulas. As far as the withdrawal speed is concerned, a withdrawal rate of 1mm/s is recommended for FiLaC®. Concerning the evaluation of treatment success he emphasized, treatment success is primarily defined using clinical features and lack of symptoms, and imaging as needed. The key outcome criteria for FiLaC® are postoperative pain, risk of complication (especially continence disturbance) and healing rate.

Prof. Ambe concluded his presentation with a view of the advantages of FiLaC®, including the minimally invasive approach, tissue preservation, the acceptable healing rate, low morbidity rates and the low risk of continence disturbance.

Dr. Valentina Giaccaglia

MD, PhD, FACS
Mediclinic City Hospital, Dubai, UAE

FiLaC® with VAAFT

In her presentation, Dr. Valentina Giaccaglia spoke about FiLaC® with VAAFT. VAAFT is short for Video Assisted Anal Fistula Treatment, a method invented by Dr. Piercarlo Meinero and developed with Karl Storz. Giaccaglia refers to Meinero P, Mori L. according to whom 136 patients underwent VAAFT 2006-2011 with a primary healing rate of 73.5% after 2-3 months and 87.1% after 1 year without major complications.

VAAFT and FiLaC® are both minimally invasive and sphincter-saving techniques to treat anal fistula. VAAFT treats fistula under direct vision, while FiLaC® achieves circular closure. VAAFT plus FiLaC® combines the advantages of two technologies and is a promising procedure for complex anal fistula. According to Mori et al (Laser modified VAAFT technique for complex anal fistula; Seattle, ASCRS Congress 2018) 50 patients underwent VAAFT and FiLaC® (72% male) with a median follow up of 18.6 months, median operative time of 41 minutes and a primary healing rate of 84%. Complications only occurred in one case (anovaginal fistula) and there was no persistent fecal incontinence.

The anal fistula fiber of biolitec® is used towards the end of VAAFT to 'seal' the fistula. It can be inserted into the VAAFT operating channel and offers a 360 degrees (ring-like) radiation pattern. The total energy used varies from 150-300 Joules, depending on the fistula length (15-30 seconds). The treatment follows two phases. The diagnostic phase is about correct visualization and isolation of internal opening as well as correct visualization of all fistula tracks, whereas the operative phase includes fistula destruction from the inside, cleaning and internal closure of the opening. During the diagnostic phase enlargement of the external opening and/or excision of fibrotic tissue (as little as possible) might be required. The fistuloscope is then introduced in the external opening with washing solution already running (5 liters glycine + mannitol). The finger is used to guide the fistuloscope insertion. Visualization is done via anal retractor. Instead of Eisenhammer, Dr. Giaccaglia uses the transparent plastic anoscope from STARR kit for better visualization. Then the inner opening is located. 2-3 stitches of Vicryl 2-0 are positioned to isolate the internal opening (Volcano). During the operative phase the fistula is then destroyed from the inside under vision via monopolar electrode. Fistula, granulation tissue and abscess cavities are destroyed progressing from the inside to the outside. Necrotic material is removed – under vision - with Endobrush. In case of very high inner openings hermetic closure is done with Stapler. Alternatives for low openings are stitch or flap.

Dr. Giaccaglia's has one of the largest numbers of patients treated with VAAFT and FILAC® in the Middle East. Before surgery, all patients undergo: digital Rectal Exam, video-anoscopy and endo-anal ultrasound. Before surgery, some patients undergo: MRI anal canal with contrast (if fistula is high and/or complex), gastroenterologist assessment with eventual colonoscopy (if Crohn's is suspected) or anorectal manometry and eventual biofeedback and pelvic floor rehabilitation if previous anal surgeries have been done. For fistula cauterization via FiLaC® and VAAFT in continuous mode energy of 150-300 Joules is used, depending on fistula length (15-30 seconds). Dr. Giaccaglia gives case studies - recurrent anal fistula with seton, Crohn's Recurrent anal fistula, Severe Crohn's anterior fistula and anterior recurrent fistula – where FiLaC® and VAAFT without seton or wound dressings led to complete healing or at least improvement of quality of live without incontinence. Based on 483 patients with long follow-up, the healing rate at 6 months is 79% and at 9 months 83% (spontaneous healing) without cases of incontinence. Giaccaglia considers Laser (FiLaC®) now an integral part of her OT setting together with VAAFT. It is a safe technique with very low complication rate, which is well tolerated by patients (minimal pain, quick recovery), offers very good healing rates and is easy to learn.

Dr. Tony Sukentro

SpB (MC, Harapan Bunda, STWC, TheDermawhite, PT DKN)
Indonesia

FiLaC® without Seton

In his presentation Dr. Tony Sukentro gave an overview about anal fistula treatment with FiLaC® without seton in Indonesia. FiLaC® offers the advantages of reduced tissue damage, less postoperative pain and shorter recovery time. Benefits of doing the treatment without seton are enhanced patient comfort, better healing and avoiding complications from traditional seton use.
In Indonesia there are many unique cases and conditions and there are already FiLaC® studies from Turkey on treatments without prior use of loose seton. Setons can be painful and uncomfortable for the patient. Also, patients often come from remote islands, making a seton and therefore several operations impractical for them. Patients therefore often want the laser treatment directly. The most common forms of anal fistula condition in Indonesia are blind fistula, multiple fistula with 8 to 15 external openings, respectively 1 to 3 internal openings, as well as long fistulas in the gluteal area, scrotal area or pubic area etc. As adequate seton is not available, physicians are therefore dependent on improvisation using catheters, suction, prolene and even nylon threads.

The essential steps of treatment are closure of the inner opening, eradication of the epithelial lining of the fistula, draining the discharge, pus or abscess, controlling the infection and promoting the secondary healing. MRI fistulography is a must. The criteria are determined with Parks or MRI. A simple case in our experience would be the following: the external opening is located less than 4 cm from the anocutan line; there is a single internal opening in the crypt (linea pectinea to anorectal line); the tract is straight without branches; with or without infection; it is the first operation; there is no fibrosis; there are no other diseases such as TBC, diabetes, IBD, Crohn's disease, HIV etc. After reconstruction of the fistula tract via MRI, 2D drawings are created. This is followed by exploration of the inner opening via steel probe as well as injection of H_2O_2 and methylene blue. The metal probe must be used very carefully and gently so as not to unintentionally create a false inner opening. After the inner opening has been explored and located, the laser fiber guided through the catheter is withdrawn from the inner opening at 1 mm/sec to burn the tissue with a laser power of 13W. The inner opening is stitched continuously with Vicryl 2.0. Penetration caused by the fiber must be avoided, and we therefore use the laser starting 0.5 cm below the closure.

After successful firing (retraction of skin; smooth discharge of smoke), we excise the outer opening in the case of infected fistulas; we do not excise it in the case of non-infected fistulas. Additional firing is carried out until there are no more openings or branches. For complex fistulas the procedure is the same. But after firing of non-shrinkage fistula / large diameter fistula debridement is done with brush and curettage; also washing with oH_2O_2 is done. The external opening is always excised.
After the operation, the patient receives a liquid diet for 3 days. In cases of simple fistulas oral antibiotics and analgetics are prescribed for 5 days. The wound is covered with gauze. The wound care is done with iodine solution, until the discharge is minimal, and is continued with mebo ointment to support secondary healing.

In the case of complex fistulas, 15-minute sitz baths in warm water with antiseptic solution twice a day are prescribed. The rest of the procedure is the same as for simple fistulas. Follow-up examinations take place online or offline every week in the first month, then every two weeks in the second month and monthly after the second month. If there is no improvement after 6 months, a new MRI is performed, and if no improvement is achieved by MRI, a second FiLaC® treatment should be considered. No muscle damage or incontinence was observed. Dr. Tony Sukentro illustrated his presentation with various case studies. The healing rate after FiLaC® treatment amongst a total of 235 patients from 2020 to January 2024 was 64%.

Dr. Hana Tashkandi

SBS, FACS, Associate Professor of Surgery
King Abdulaziz University, Fakeeh hospital, Jeddah , Saudi Arabia

FiLaC® Journey - From conventional surgery to FiLaC®

Dr. Hana Tashkandi's presentation at PROCTOCOM 2024 explores the evolution of anal fistula management, with a particular focus on the FiLaC® (Fistula-tract Laser Closure) technique. Anal fistula repair is a significant surgical challenge, with up to 30% of cases resulting in persistence despite treatment. Ideal management aims to eradicate sepsis, promote healing, and preserve sphincter integrity. FiLaC® represents a minimally invasive alternative, offering promising results with reduced tissue trauma and good functional outcomes.

The presentation outlines the key surgical options for anal fistula repair, including fistulotomy, seton techniques, advancement flaps, the LIFT procedure, fibrin glue, and bioprosthetic plugs, while emphasizing the unique benefits of FiLaC®. It is particularly suited for recurrent or multiple fistulas and high trans-sphincteric fistulas. Preoperative assessments using physical exams, 3D endoanal ultrasound, or MRI are essential to determine suitability.

FiLaC® procedures should be performed under general anesthesia, typically in a staged approach: first, sepsis is drained and a seton placed for 8-12 weeks, followed by fistula repair using curettage or excision of the internal opening, closed with sutures. The fistula tract is then obliterated using a 1470 nm wavelength diode laser and FiLaC® fiber (360° radiation pattern), which minimizes trauma and ensures effective closure.

The presentation highlights a pilot study from 2011 of 11 patients treated with FiLaC® for cryptoglandular fistulas, achieving an 81 % success rate within seven months. FiLaC® is lauded for its minimal invasiveness, sparing muscle tissue and preserving continence.
The exemplary case of a 38-year-old woman with a trans-sphincteric fistula and perianal hemangioma demonstrates FiLaC®'s versatility. The Patient, morbidly obese, had been suffering from perianal swelling and pain for three years. The swelling was gradually increasing in size over years, with blood stained purulent discharge. The patient did not suffer from painful defecation, there was no history of trauma, and the patient did not regularly take medication.

Preoperative MRI was done to assess the vascular structure of the hemangioma and to assess the fistula tract. Doppler Ultrasound was used to assess if there is a large feeding vessel. The findings were consistent with perianal hemangioma with no large feeding vessel and there was a transsphincteric anal fistula. Examination under anesthesia showed 3x2 cm compressible mass, consistent with peri anal haemangioma, and a fistula tract traversing it. A seton was placed. Three months later FiLaC® was used to obliterate the fistulous tract, and after three further months, full obliteration of the tract was achieved. As far as the fistula is concerned, the patient has improved dramatically, but she was still complaining of the perianal swelling. The patient was able to go back to work after one week with tolerable pain. At a follow-up examination, the symptoms had improved. As part of the follow-up examinations, an MRI was carried out which showed that the tract was completely obliterated. Eventually the excision of the perianal hemangioma was done. It can be assumed that the staged operation helped to spare the patient wound complications and massive bleeding.

Dr. Tashkandi concludes that FiLaC® offers a safe, minimally invasive solution for anal fistulas, achieving excellent functional outcomes without procedure-related complications. Its success lies in staged operations, which reduce wound complications and improve healing. FiLaC®'s ability to minimize trauma, coupled with its promising results, positions it as an essential tool in the treatment of anal fistulas and related conditions.

Dr. Atif Alvi

MBBS, MSc, MRCS,FRCS, FRCS (General/Colorectal Surgery)
Consultant Colorectal, Laparoscopic & General Surgeon
Kings College Hospital Dubai

Laser Treatment (SiLaC®) for pilonidal sinus – tips and tricks

Pilonidal Sinus is a common suppurative illness that often affects people between the ages of 15 and 30 and mostly affects young men. The sacrococcygeal region skin is the usual location. While the chronic type causes sporadic drainage from the pilonidal sinus(es), the acute form manifests as an abscess under strain. The clinical diagnosis is straightforward.

Clinical presentations are either acute (painful, tense pointing abscess), the transition to chronic phase (the suppurative cavity drains spontaneously) or chronic sinus (intermittent seropurulent discharge or occasional bleeding). Possible findings on examination include: Pilonidal cyst or sinus located beneath the skin, or at the top of the gluteal cleft, or at the level of the coccyx and/or the sacrum, or 4 to 10 cm from the anus, in the midline, but often asymmetrical in shape. The goal of the treatment is the effective management of the acute infection, the maintenance of low recurrence and complication rates as well as swift healing to facilitate earlier return to work.

SiLaC® for Sinus Pilonidalis (Sinus Laser ablation of the Cyst) is a treatment to heal the sinus while preserving the overlying skin (Rima Ani) and preventing recurrence. It is a simple and minimal invasive procedure shortening hospital stay and sick leave. SiLaC® reduces pain and post op care while offering best esthetic results and minimal surgical time. Laser ablation is a feasible minimally invasive means of obliterating pilonidal sinus tracts without a need for excessive tract dilation. The treatment can be repeated if necessary and offers cure rates of over 80%, as demonstrated by reference to four studies.

Important aspects for SiLaC® treatment are the correct patient selection, exclusion of abscess and the use of antibiotics. The sinus track and pits have to be cleaned with brush, forceps, Betadine / hydrogen peroxide. A punch biopsy needle is used to open up the pit(s). Video scope (if available) and ice compressions are useful. Post-operative instructions for patients include avoiding strain, as well as keeping the area dry and clean. Gentle massage evacuates reactive fluid.

The personal biolitec laser experience of Dr. Alvi at Kings College Hospital Dubai includes a total of 74 patients who underwent SiLaC® surgery to treat pilonidal sinus (52 male and 22 female). 64 patients had primary surgery with laser and 10 for recurrence. At follow up in weeks 2 and 4 post-op, most patients had no pain or very mild discomfort with minimal discharge. The pilonidal sinus healing rate (initial results) after 3 months was 75.6%. The remaining patients showed recurrent sinus disease. 3 underwent repeated laser treatment (settled at two months). 5 received antibiotics (2 settled after three weeks and 3 transferred to another hospital). 10 patients underwent excision with primary closure (not settled with antibiotics; recurrent abscess; patient choice)

The treatment protocol includes the clinic's decision on the type of treatment, prone position, exposure of all pits, extensive cleaning, continuous laser fire at 10W pulling speed of 1mm/s resulting in 100J/cm. In case of unsuccessful treatment one more attempt can be offered. Criteria for excision are no settling after the first or second attempt, failed settling after three months, patient choice and a wide cavity with recurrent abscess. Healing after laser ablation treatment of primary and recurrent pilonidal sinus disease is preserved with excellent long-term outcomes. Dr. Alvi recommends it as a strong alternative to surgical excision.

Dr. Mustapha Ouali

General Surgeon and Proctologist
Proctolaser Clinic, Sfax, Tunisia

SiLaC® with EPSiT®

Dr. Mustapha Ouali explained his technique combining SiLaC® with EPSiT® procedures for treating pilonidal sinus disease (PSD). Pilonidal abscess treatment involves incision +/- drainage with seton. Via incision the abscess is surgically opened to release pus and relieve pressure. The Seton refers to maintaining an open tract, ensuring continuous drainage and promoting healing. The definitive treatment combines SiLaC® and EPSiT®, using laser and endoscopic guidance to clean, ablate, and close the sinus, ensuring minimal pain and quick recovery while reducing the risk of recurrence.

A retrospective cohort study was conducted based on 83 patients. Primary and recurrent pilonidal sinus cases were treated. Key outcomes from our series using the SiLaC® and EPSiT® techniques are positive. The median operative time was 25 minutes. No postoperative pain medication was needed, and patients had an average hospital stay of just 7.2 hours. Early return to daily activities was observed, with 76.9% able to sit comfortably on the day of surgery and 92.3% returning to work the next day. The complete recovery rate was impressive at 96.5%, with an average healing time of 17.3 days. Recurrence occurred in 3.5% of cases, all of which were successfully managed with additional laser treatments. The combination of SiLaC® with EPSiT® achieved a higher healing rate of 96.5%, compared to 91.9% with SiLaC® alone in Ouali's earlier series. This improvement highlights the added benefit of integrating endoscopic visualization with laser ablation. The combined approach of SiLaC® + EPSiT® also offers superior outcomes compared to other authors. Operative time, recovery, and recurrence rates from our study are consistent with the established results, reinforcing the validity of the laser-endoscopic approach. Laser-endoscopic therapy offers several significant benefits, particularly in terms of shorter operative times and faster recovery with minimal pain.

Ouali provided a clear, step-by-step pathway for the effective diagnosis, treatment, and postoperative management of pilonidal sinus disease. The therapeutic approach for pilonidal sinus surgery using the SiLaC® and EPSiT® techniques is divided into two key processes: the first surgery and the surgery in case of recurrence. In both cases, the procedure starts with the identification of the sinus and an endoscopic diagnosis. During the first surgery, necrotic debris is cleaned, and hair is extracted. The laser is then used to ablate the sinus, followed by shrinkage and postoperative care. In the case of recurrence, a different process is followed, with a particular focus on laser destruction of the hair follicles before extracting the hair, which serves as an indicator of the areas to be lasered. The procedure is completed by treating newly formed tracts through cleaning and use of the SiLaC® technique. Postoperative care remains essential in both processes to ensure proper recovery and prevent further recurrence. Treatment of pilonidal sinus abscess involves surgically opening the abscess via incision to release pus and relieve pressure. The Seton refers to maintaining an open tract, ensuring continuous drainage and promoting healing. The definitive treatment combines SiLaC® and EPSiT®, using laser and endoscopic guidance to clean, ablate, and close the sinus, ensuring minimal pain and quick recovery while reducing the risk of recurrence.

In conclusion, the laser-endoscopic combination provides an excellent option for minimally invasive treatment of pilonidal sinus. It allows for quick recovery, minimal postoperative care, and a low recurrence rate. Although further studies with larger sample sizes and longer follow-up periods are necessary, the results so far are very encouraging. In clinical practice, this technique could be a game-changer. It minimizes the need for postoperative care, allowing patients to return to work quickly.

Prof. Dr. Peter C. Ambe

M.D, MBA, FEBS. Professor of Surgery, Colorectal, GI, Oncologic and Minimally Invasive Surgery.
Witten / Herdecke University, Germany

Best clinical practice recommendations for the management of symptomatic hemorrhoids via laser hemorrhoidoplasty: **the LHP® recommendations**

In his presentation "Best clinical practice recommendations for the management of symptomatic hemorrhoids via laser hemorrhoidoplasty: the LHP® recommendations", Prof. Dr. Peter C. Ambe pointed out that the use of lasers in proctology has increased significantly over the last 24 years. The use of diode lasers with a wavelength of 980 nm or 1470 nm is widespread. According to the article "Non-excisional laser therapies for hemorrhoidal disease: a systematic review of the literature" by Gregoire Longchamp, very satisfactory cure rates for non-excisional hemorrhoidal disease are documented, which in most cases are over 70% and sometimes even reach 100%. Ambe emphasized that the results of meta-analyses and systematic reviews provide the highest level of evidence available in the hierarchy of scientific knowledge. He points out that the LHP® recommendations are based on the assessment of 48 experts who made 21 recommendations after 8 months of consultation following his plea in 2023 for a consensus document due to the vast differences in laser use.[1]

As far as the question of the main indications for LHP® is concerned, LHP® is recommended for symptomatic grade 2 and 3 hemorrhoids. These represent the standard indications, and LHP® is recommended as a single intervention (without additional procedures like HAL or mucopexy). With 89.71% there is a strong consensus. According to recommendation 2 and based on a strong consensus of 86.76%, HAL with or without ultrasound guidance can be performed in combination with LHP® for grade 2/3 hemorrhoids, beginning with HAL prior to LHP®. Grade 4 hemorrhoids can be managed via a combination of LHP®, HAL and/or mucopexy based on surgeon´s expertise and patient´s expectation (R3, Consensus: 76.47%). Only pathologic hemorrhoids should be treated (R4, Strong consensus: 88.24%). Management of external hemorrhoids and skin tags may be considered in individual cases (patient´s expectation) but should not represent an elementary aspect of the standard LHP® procedure (R5, strong consensus: 92.65%). Additional proctological procedures can be combined with LHP® in individual cases but cannot be considered as a routine (R6, strong consensus: 95.59%). Acute inflammation e.g. abscess, proctitis and fistula represent absolute contraindications for LHP® (R7, consensus: 83.82%). LHP® could still be a good option following recurrence and should be discussed with the patient on an individual basis (R8, strong consensus: 88.24%). Bowel prepping may be omitted prior to standard LHP®. If needed, a simple enema may be given about two hours prior to surgery (R9, strong consensus: 92.65%). Routine single shot antibiotics can be omitted during LHP® Antibiotics prophylaxis should be considered on individual cases based on patient´s risk factors (R10. Strong consensus: 92.65%). Both 980nm and 1470 nm wavelengths can be safely used for LHP® (R11. Strong consensus: 97.06%). The optimal laser setting with regards to Laser Power in Watt for LHP® is 12-15W with 1.2 seconds single pulse length duration for 980 nm, and 8-12W at 3 seconds for 1470 nm (R12. Strong consensus: 88.24%). LHP® can be performed in local, regional, and general anesthesia (R13. Consensus: 83.82%). The introduction of the laser probe is performed via a small incision at the anal verge, then the probe is gently advanced in the submucous space under digital and visual (indicator light) control. (R14. Strong consensus: 94.12%). Concerning the optimal approach and energy for a standard LHP® strategy regarding the number of pulses per pile the following is recommended: For standard LHP® (grade 2/3 hemorrhoids) 2 pulses about 0.5 - 1 cm above the dentate line, 3 pulses at the level of the dentate line and 3 pulses below the dentate line. Additional pulses may be needed depending on the size of the piles and surgeon´s expertise. However, the maximum energy per pile should not exceed 350 J (R15. Strong consensus: 88.24%).

1 Ambe, P. C.: Laser interventions in coloproctology. A plea for standardized treatment protocols; Techniques in Coloproctology; Oct 27, 2023; (10): 953-955. doi: 10.1007/s10151-023-02859-2

Dr. Claus Blumberg

Specialist - general and colorectal surgeon

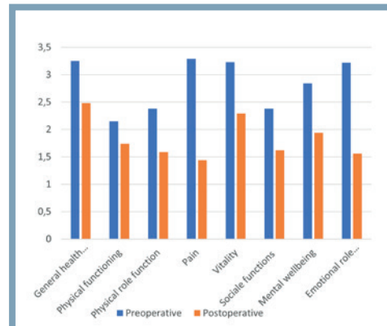
LHP/4th degree and ambulatory operations

Dr. Claus Blumberg's presentation focuses on Laser Hemorrhoidoplasty (LHP®) as an innovative and minimally invasive approach to treating hemorrhoids. The procedure has been extensively applied and analyzed over several years, with key findings highlighting its advantages, clinical results, and long-term outcomes. LHP® is presented as a versatile technique suitable for treating both internal and external hemorrhoids, without limitations in pile size. Offering multiple advantages, including a low recurrence rate of 6.2% (based on data from 2.229 patients treated between 2014 and 2022), fewer complications, reduced postoperative pain, and rapid recovery, it ensures few sick days and an exceptionally high patient satisfaction rate (>93%). Importantly, it can be performed as an ambulatory procedure under local anesthesia, further enhancing convenience and accessibility for patients.

For LHP® a laser fiber with a diameter of less than 2 mm is used, which is inserted high up into the anal mucosa above the piles to reduce arterial blood flow to the hemorrhoidal vessels. The average energy used per patient is close to 500 J, and the procedure is completed in just 8.4 minutes on average. No mucopexy or other additional interventions were required, emphasizing its simplicity and minimally invasive nature. A postoperative evaluation after 19 months among 73 patients revealed no significant complications such as bleeding, strictures, or stool irregularities. All wounds healed completely, and there were no recurrences within six months. Long-term follow-ups of up to eight years corroborate these findings, confirming the durability and reliability of the procedure. Furthermore, the absence of significant complications underscores its safety.

The presentation highlights the improvement in patients' quality of life following LHP®. Pre- and postoperative assessments using the SF-8 quality of life questionnaire demonstrated significant enhancements across multiple domains. Physical improvements included reduced pain levels, improved mobility and mental health benefits such as anxiety, depression, and overall emotional well-being. These findings were particularly evident 6-8 weeks after the procedure, emphasizing the positive impact of LHP® (see graph and table below). The presentation also highlights the suitability of LHP® for managing thrombosed grade IV hemorrhoids. In a study of 73 patients with this condition, the procedure demonstrated rapid results with an average operation time of 6.8 minutes and hospital stays averaging 1.8 days. Postoperative pain scores were exceptionally low (1.8 on the first day and 0.2 by day seven), and no major complications were reported. Long-term assessments confirmed complete wound healing, no recurrences, and high satisfaction rates.

Compared to conventional hemorrhoidectomy and other surgeries, LHP® stands out due to its sphincter-saving approach, which is crucial for patient outcomes. This advantage makes LHP® a preferred option for both patients and surgeons seeking effective treatment with minimal risks and a quick recovery. The presentation concludes by positioning LHP® as a modern, safe, and well-tolerated solution for hemorrhoids, particularly suitable for grade III and IV cases. The simplicity of the procedure, coupled with its proven effectiveness and high levels of patient satisfaction, establishes it as a valuable advancement in proctological care. Its long-term results and ability to improve quality of life further cement its place as a leading minimally invasive treatment option.



	Pre-operative	Post operative
General health perception	3,25	2,48
Physical functioning	2,15	1,74
Physical role function	2,38	1,59
Pain	3,29	1,44
Vitality	3,23	2,29
Social functions	2,38	1,62
Mental wellbeing	2,84	1,94
Emotional role function	3,22	1,56

Prof. Dr. Samer Deeba

**MD FACS, Associate Professor of Surgery,
American University of Beirut**

Laser Hemorrhoidoplasty - biolitec®

In his presentation on Laser Hemorrhoidoplasty (LHP®) Prof. Dr. Samer Deeba gives an overview on his experience with the therapy by biolitec® from the start including dos and don'ts to the audience. His talk was intended to prevent the visitors falling for the same. He started LHP® treatments on patients asking for it and then started pushing for it.

In the course of time a lot of changes in the technique came about and lessons had to be learned based on mistakes and complications. In the beginning 12W were used with pulse settings of 3 seconds. Massive amounts of energy were used reaching 800 J per pile. Cooling with ice was done for two minutes. No sutures were applied.

Unintended effects of the treatment included massive bleeding requiring hospitalization, transfusions, and reoperations. But afterwards there were no more hemorrhoidal piles or tissue to be seen. The hemorrhoids were completely obliterated. The bleeding was usually controlled at the apex where the hemorrhoidal artery is.

As there were two bleedings a week requiring operating, suture control was introduced. Suture ligature was added to the artery at the apex before we started doing LHP® ablation, and bleeding requiring intervention did not occur anymore. In some cases patients returned after a few weeks with prolapse (7 o'clock), for which no explanation was available. Extrapolating from HAL RAR, it was decided to do a limited three plexus mucopexy at 4 , 7, and 11 o'clock just before the LHP® ligation, to reduce all prolapse, to keep the scar in as well as to control the artery at the rectum and the apex of the hemorrhoid.

A 2-0 vicryl suture was used, starting at about 6 cm above the verge with 0.5 cm intervals, and ending above the dentate line just above the plexus, tie pulling all the suture cephalad. Low bedding of the pexy is to be avoided.

Experiences at the AUBMC concerning laser treatment of hemorrhoids include a total of 131 patients who underwent LHP® for grade II and III hemorrhoids. A diode laser was used with 1470nm wavelength. In the beginning (August 2023) the mean energy used was 1810J for treating 2 to 5 plexus (min: 681J, max: 5136J). Today the mean energy used is 1050J. 121 patients (93%) had an uneventful postoperative course without complications, 2 patients (2.6%) experienced postoperative bleeding requiring reoperation. None of the patients required opioid analgesia postop and all were discharged on POD 1. 6 patients (5.3%) required mucopexy within 1 year.

Dr. Khalid AlRosini

**FRCSI, FRCSEd, FACS, MMEd
Head Section of Colorectal Surgery
A.Professor, King Abdulaziz Medical City, Ministry of National Guard Health Affairs**

Literature review for Laser Hemorrhoidoplasty

The presentation by Dr. Khalid Al Resini at PROCTOCOM 2024 explores Laser Haemorrhoidoplasty (LHP®) as a minimally invasive treatment for grade II and III hemorrhoids using current literature. It emphasizes LHP®'s advantages in reducing operative trauma, postoperative pain, and recovery time while addressing its limitations, such as long-term recurrence. Findings from clinical studies and meta-analyses highlight LHP®'s role compared to traditional and advanced surgical methods.

A prospective study of 50 patients treated with LHP® showed strong short-term results. Pain was minimal postoperatively, with 74% reporting VAS scores of 0-1 on day 1 and a median score of 0 by day 30. Symptom improvement was reported by 92% after 60 days, with nearly all cases seeing hemorrhoidal prolapse reduced to grade I and a recurrence rate of just 2%. Complications were mild in 18% of cases, including thrombosis and eczema, with a median work incapacity of two days. However, long-term follow-up revealed a recurrence rate of 36% within five years. Despite this, 64% of patients maintained symptom relief, though only 64% would recommend LHP®, compared to 98% shortly after surgery. Persistent symptoms included bleeding and itching.
LHP® was compared to conventional Milligan-Morgan (MM) hemorrhoidectomy, with meta-analyses showing reduced operative blood loss, shorter surgical times, and less postoperative pain. However, long-term recurrence and symptom relief were comparable, suggesting LHP® excels primarily in short-term outcomes.

Compared to conventional hemorrhoidectomy LHP® showed shorter operative times, lower blood loss, less postoperative pain and lower VAS scores. People treated with LHP® returned to work earlier. In comparisons with stapler hemorrhoidopexy, LHP® demonstrated lower pain scores during recovery, while recurrence and complications as well as days taken to return to work were statistically similar. LHP® was also analyzed against LigaSure™ and diathermy in a study of 93 patients with grade III and IV hemorrhoids. Both LHP® and LigaSure™ significantly outperformed diathermy hemorrhoidectomy in reducing postoperative pain, operative blood loss, and recovery time, while improving quality of life. LHP® offered slight advantages in operative efficiency and matched LigaSure™ in patient satisfaction. Combining LHP® with digital-guided hemorrhoidal artery ligation (DGHAL) further showcased its versatility. This combination significantly reduced intraoperative bleeding and postoperative pain compared to Milligan-Morgan, with patients returning to work over a week earlier. These findings highlight LHP®'s potential when integrated with other methods to address recurrence.

In conclusion, LHP® is a highly effective, minimally invasive treatment, excelling in short-term recovery, pain management, and reduced complications. Compared to conventional and advanced methods, it provides superior initial outcomes. However, long-term recurrence remains a challenge, suggesting a need for optimization and integration with complementary techniques such as DGHAL to enhance long-term efficacy. As a minimally invasive option, LHP® represents significant progress in hemorrhoid treatment and holds promise for advancing patient outcomes through refined and multimodal approaches.

Dr. Franky Mainza Zulkarnain

General Surgeon
Pondok Indah Hospital, Jakarta Indonesia

Experiences „Laser in Proctology“

Dr. Franky Mainza Zulkarnain has gathered experience with 1.500 LHP® and 500 FiLaC® cases since 2015. In his presentation he talked about whether the new LHP® Revo fiber by biolitec® makes a difference. He compared the biolitec® standard LHP® fiber to the LHP® Revo fiber which offers a new design concept splitting the laser power into two parts at the fiber tip: 50% straight and 50% radial. Use of the Revo fiber with fixed connector also has the advantage of more easy handling in the OR. Goals of the new fiber are less carbonization, more effectiveness for big piles, less damage to the tissue/mucosa as well as preventing swelling and bleeding intra operative and post operative. Laboratory tests with liver meat were carried out with the fiber. Carbonization with LHP® standard fiber is seen already at 95.7 Joules compared to 143.6 Joules with Revo fiber. The coagulation zone with the standard LHP® fiber at 8W / 3sec pulse / 4 pulses is 4.5 x 7.8 mm (35.1 mm²), whereas with the new Revo fiber at 8W / 3sec pulse / 4 pulses it is 5.0 x 11.9 mm (59.5 mm²). The Revo fiber creates a longer impact zone by similar diameter and leads to less manipulation in the treated pile. In summary, the new Revo fiber offers less carbonization and an elongated coagulation zone.

From March 13 to October 09, 2024, a Revo fiber case study was conducted at Pondok Indah hospital, Indonesia, based on 50 patients treated and follow up after 2-3 weeks. Treated were 16 grade 2 piles (13%), 107 grade 3 piles (84%) and 4 grade 4 piles (3%). Treatment was done under general anesthesia. As far as additional treatments are concerned, 33 patients underwent mucopexy, 12 patients received skin tag removal (patient request), external piles were removed in 7 patients (patient request) and polyps were removed in 2 patients. The average energy used per pile was 247 Joules. None of the patients experienced intraoperative or postoperative complications. Spontaneous bleeding occurred in 1, bleeding after defecation in 10 and discharge in 18 out of 50 patients. Mild swelling was observed in 10 patients, defecation issues in 3 and burning sensation in 0 patients. Pain scores were reported as follows: 14 out of 50 patients experienced no pain, 35 out of 50 had mild pain lasting up to 5 days, 1 out of 50 reported moderate pain for up to 1 week, and none of the 50 patients experienced severe pain.

In summary, the Revo fiber demonstrated several advantages in the treatment of hemorrhoids: Less energy (in Joules) was required due to better distribution of the laser energy. The treatment resulted in less tissue damage. Carbonization was absent or minimal. Patients experienced less post-operative bleeding. Pain levels were reduced compared to traditional methods. Fewer skin tags were observed.
The technique proved particularly helpful when dealing with big piles. Patients experienced no or minimal swelling following the treatment. These findings suggest that the Revo fiber may offer a more efficient and comfortable treatment option for hemorrhoid patients. The new fiber is currently under certification process.

Save the Date
Proctocom 2025

September
19th - 21st, 2025
Krakow, Poland

We look forward to seeing you.

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