



EVOLVE®
EVOLVE®

Laser Solutions in Coloproctology

EVOLVE®



Our Laser Solutions in Coloproctology

HeLP®

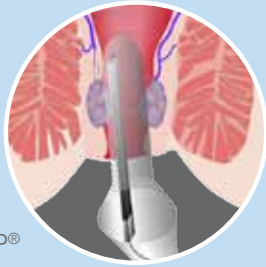
Ambulatory Laser Treatment
of Hemorrhoids

FiLaC™

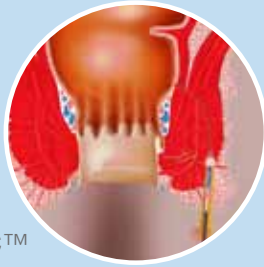
Fistula-tract Laser Closure

LHP™

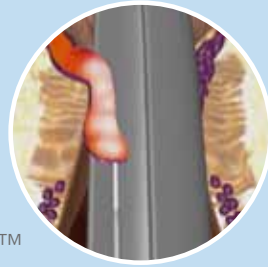
Laser HemorrhoidoPlasty



HeLP®



FiLaC™



LHP™

Safe, Effective and Fast

HeLP® - for hemorrhoids

HeLP® is the least invasive of surgical procedures for hemorrhoidal dearterialization for curing hemorrhoids. HeLP® uses an integral procedure kit specially designed by biolitec to achieve a treatment that is fast, painless, and above all, simple and reproducible by the surgeon.

FiLaC™ – for anal fistulas

The aim is to gently remove the fistula tract without damaging the sphincter. Thus, any parts of the muscle are preserved to a maximum and incontinence is avoided.

LHP™ - for hemorrhoids

This approach is used for advanced hemorrhoids under appropriate anesthesia. The energy of the laser is inserted centrally through a radial emitting fiber into the hemorrhoidal node.

Proctological Laser
Applications

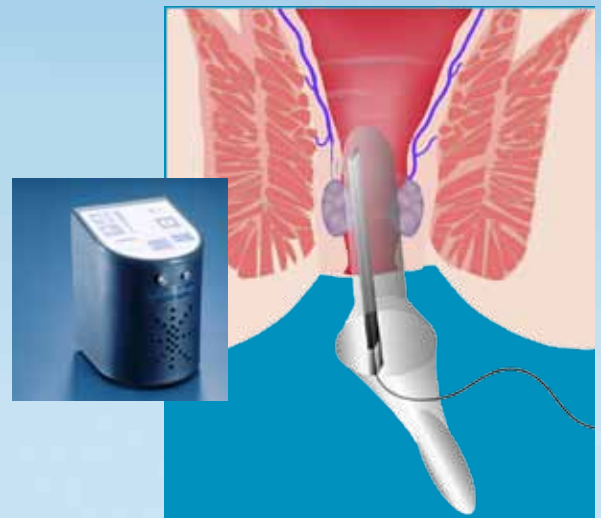
Hemorrhoid treatments

Doppler assisted Laser Ligation of the Arteries 2nd and 3rd Degree

The perfect relief/solution for patients fearing invasive painful surgical or semi-surgical techniques in this delicate matter. Especially if the patients are fed up with rubber band or sclerosation this easy and accurate application is the right alternative. It is an ambulatory approach and serves you with fast procedures needing just one intervention.

The HeLP® proctoscope is designed for easy insertion into the anal canal. It consists of a working channel containing the disposable HeLP® Doppler probe, which identifies the branches of the superior hemorrhoidal arteries above the dentate line.

The laser energy is then applied to each of the sub mucosal branches using the handpiece of the special HeLP® fiber. Laser photocoagulation of the branches closes the superior hemorrhoidal arteries and decreases the pressure in the hemorrhoidal piles. In this way the arterio-venous flow is modified leading to withdrawal of the piles on subsequent days and weeks.



The perfect Solution for Patients

Combination HeLP® and LHP™

You might as well combine both approaches to optimize patients benefit. By previously closing the feeding arteries bleedings will be suppressed to a high extend improving all subsequent measures to further reduce the symptoms of hemorrhoids.

Laser hemorrhoidoplasty (LHP™)

3rd and 4th degree

No Incisions, No Stitches, No Open Wounds



Case 1 Pre-OP



Case 1 Post-OP



Case 2 Pre-OP



Case 2 Post-OP

If immediate removal/reduction of the hemorrhoidal cushion is indicated (no matter if it is segmental or circular) this therapy will provide you with an improved patient outcome especially regarding pain and down times compared to conventional surgical proceeding. Under proper local or general anesthesia the controlled laser energy deposition obliterates the nodes from the inside and preserves the mucosa and sphincter structures to an extremely high degree.

The radial and homogenous laser emission required for this procedure results in:

- Tissue reduction in the hemorrhoidal node
- Maximum preservation of muscle, anal canal lining and mucosa
- Restoration of the natural anatomical structure

Use of laser hemorrhoidoplasty probe (LHP™) enables the endoluminal laser coagulation of both segmental and circular hemorrhoidal nodes.

The controlled emission of laser energy, which is applied to the submucosa, causes the hemorrhoidal mass to shrink. In addition, fibrotic reconstruction generates new connective tissue, which ensures that the mucosa adheres to the underlying tissue. This also prevents the occurrence or recurrence of a prolapse.

No foreign materials (clamps) need to be inserted and, unlike other procedures, LHP™ is not associated with any risk of stenosis.

Healing is excellent because, unlike conventional surgeries, there are no incisions or stitches. As a result, the patient experiences less post-operative pain and can return to normal activities within a shorter space of time.

Maximum Preservation of Muscle,
Anal Canal Lining and Mucosa

FilacTM

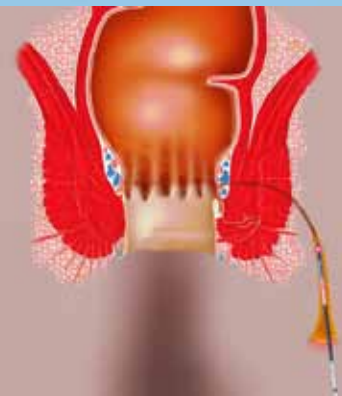
Fistula-tract Laser Closure



After therapy of the abscess and Seton drainage the fistula has epithelised



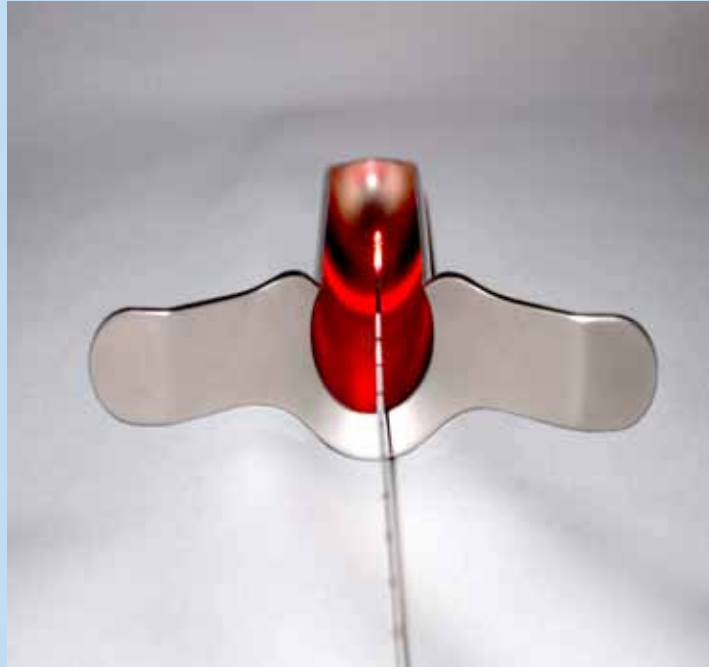
After conventional closure of the internal fistula opening the probe is inserted into the fistula tract



Homogeneous application of laser energy radially into the lumen of the fistula. The epithelised tract is destroyed and collapses rear the probe head

Maximal Preservation of the Muscle – Preservation of Continence

- Good control
- No excision or splitting
- Independent on the length of the fistula tract
- Flexible fiber also allows use in convoluted tract
- Can be executed in only a few minutes
- Can be combined with other forms of therapy for closing the osteum



Optimal Use of Laser Energy

In order to eliminate the fistula tract as gently as possible the flexible, radial emitting laser fiber is inserted from the outside and positioned exactly by using the pilot beam. Defined energy is being emitted radially into the fistula. The epithelialized tissue is being destroyed in a controlled way and the fistula tract collapses. This also supports and accelerates the healing process.

FiLaC™ fiber

The FiLaC™ fiber applies energy adapted to the pathway of the fistula tract.

The 360° energy emission ensures homogenous photothermal destruction of the fistula tract, allowing safe closure.

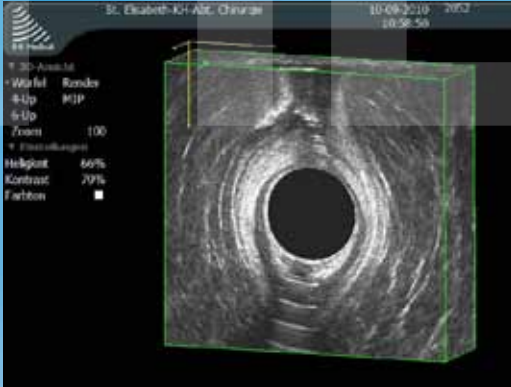
The efficient radiation concept of the FiLaC™ fiber makes optimal use of the laser energy applied.

Optimal monitoring of the fiber tip is possible thanks to its excellent ultrasound visibility (if applied).



Efficient Radiation Concept

Fistula-tract Laser Closure



3-D ultrasound illustration of a trans-sphincteric anal fistula at 12 o'clock (Contrast enhancement via H₂O₂)



Ultrasound image direct after advancement flap. In the area of the former inner opening in the Musculus sphinkter ani internus strong echo-reactions can be seen due to the applied laser energy. The protecting flap can be seen as isoechoic zone beneath.



Ultrasound image 5 days post-op. In the treated area the hyperechoic regions are vanished and form a hypoechoic district. The dimensions correlate to the original fistula tract and display the entrance depth of the laser. It also shows the safe application of the laser and short term wound healing.

By courtesy of Dr. med. A. Wilhelm

Ceralas[®] E Laser



EVOLVIVE®

HeLP®

Clinically proven:

Patients and methods: In the past three years, 200 patients were treated with Doppler-guided laser photocoagulation of hemorrhoidal arteries. In all cases, treatment was performed on an outpatient basis and anaesthesia or analgesia was not necessary.

Results: Mild intra- and postoperative complications were seen. 91% of the patients show an improvement of hemorrhoidal symptoms 1 to 12 months after treatment.

Conclusion: Doppler-guided laser photocoagulation of hemorrhoidal arteries is a good and safe method for the ambulatory treatment of hemorrhoids.

Raffaele Salfi, *coloproctology* 2009;31:99-103

Literature

FiLaC™

Material and Methods: In a pilot study we operated on 10 (8 male – 2 female) patients. Median age was 51 years (38 – 65 years). There were only cryptoglandular fistulas with either two type 4 and 3, five type 2 and 1 type 1 fistula. All patients had previous surgery due to perianal abscess and fistula up to 6 times prior to definitive surgery. First, all patients had drainage of their perianal abscesses and seton draining of the fistula.

Primarily, the outer an internal opening of the fistula were excised. Following, an advancement flap was prepared, if possible. By applying energy the fistula tract was obliterated under continuous retraction of the laser. At last the flap was placed to cover the former internal opening.

Results: Median follow up was 6.4 months. 8 out of 10 fistulas healed (80 %). One fistula persisted in a patient with a type 4 extrasphincteric fistula and a second one in a patient with a transsphincteric fistula following complicated drainage of a horseshoe abscess. Only one minor form of incontinence (soiling) was observed and no major or minor complications occurred.

Summary: In summary, anal fistula repair using a newly designed radial emitting laser probe in addition to conventional surgery is a very promising original technique in sphincter preserving anal fistula repair. The observed healing rates along with the results for postoperative continence were excellent. No complications have been observed.

Dr. Arne Wilhelm, *Techniques in Coloproctology*

LHP™

Patients and methods: In the period between 01/2006 and 10/2009 a total of 332 patients were operated with this method by using a 980nm diode laser. Hemorrhoidal tissue is being destroyed submucosally by a special radial emitting fiber. The vascular convolute is made desolate and there is fibrotization of the tissue. On some of the patients in addition to interstitial irradiation of the cushions mucopexy of all segments was done.

Results: The operation executed under daysurgical circumstances in lithotomy position took an average of 17.4 min for all three segments (from inserting the proctoscope to applying the tamponade). The average period of disability with the LHP method was 4.2 days and in combination with mucopexy 7.4 days. Within the post-operative follow-up period of 6-36 months a prolapsed node could be found in 5.8% of all patients examined (one or more 2nd degree nodes).

Conclusion: The LHP method represents another alternative for existing methods. The complication and recurrence rates as well as operating time are not longer compared to conventional techniques. Especially the work mode which preserves the anoderm and reduces hemorrhoidal tissue painlessly and without many complications is of a big advantage. The mucous membrane remains intact and the natural anatomy can be restored.

Dr. A. Karahaliloglu, *Coloproctology* 2010, 32:116-123

Unmatched Performance in
Speed, Safety and Effectiveness

HeLP®

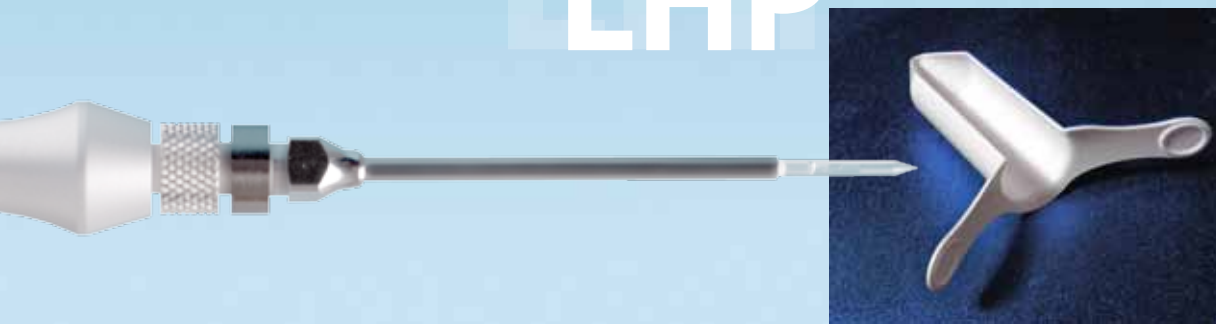


The HeLP® platform comprises a Ceralas laser including a high-frequency Doppler (20 MHz) for assessing hemorrhoidal artery position, and specially designed HeLP® procedure kits, which includes all equipment needed to carry out these treatment options.

FiLaC™



LHP™



Optimal use of laser energy

Other possible proctological applications of this laser procedure:

- Sinus pilonidalis
- Skin tags
- Removal of polyps
- Condyloma
- Fissures



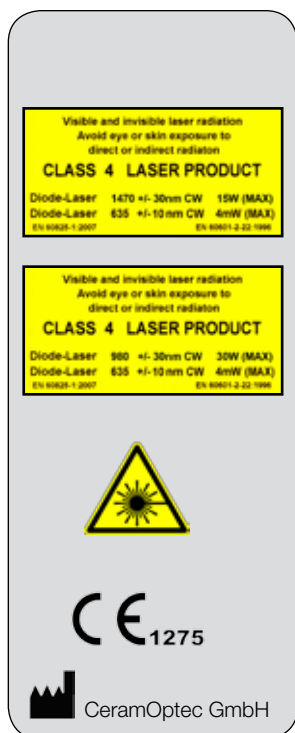
Hardware & Accessories



EVOLVE® Laser System

Ceralas® E 980nm 30W

Ceralas® E 1470nm 15W



Article Description	Item Number	Manufacturer
Doppler assisted laser ligation of the arteries		
Dopplertransceiver	AB2530	Vascular Technology, Inc.
HeLP® Procedure Kit <ul style="list-style-type: none"> • Proctoskope with working channel • Doppler Probe • Laser Fiber with handpiece 	502400510	CeramOptec GmbH
Fistula-tract Laser Closure		
FiLaC Fiber	501100250	CeramOptec GmbH
Laser Hemorrhoido Plasty		
Ceralas® LHP-Fiber incl. Handpiece	501100210	CeramOptec GmbH
LHP Procedure Kit <ul style="list-style-type: none"> • LHP Fiber • single use Proctoscope 	501100220	CeramOptec GmbH
Universal Handpiece		
Universal biolitec® Dual Luer Lock Handpiece	AB2517	CeramOptec GmbH

Ceralas® E Diode Laser

biolitec® worldwide

biolitec biomedical technology GmbH, Distributor

Otto-Schott-Str. 15 · 07745 Jena · Germany
Phone: +49 3641 519 53 0
Fax: +49 3641 519 53 33

CeramOptec GmbH, Manufacturer

Siemensstr. 44 · 53121 Bonn · Germany
Phone: +49 228 979 67 0
Fax: +49 228 979 67 99

biolitec Italia SRL

Via Monza 133 · 20129 Milano · Italy
Phone: +39 0228 172 400
Fax: +39 0228 172 29

biolitec SIA

Kaniera iela 10a · Riga 1063 · Latvia
Phone: +371 653 436 46
Fax: +371 653 076 78

biolitec SPb

Babushkina st., 36, b.1
Saint-Petersburg, 192171 · Russia
Phone: +7 812 4492936
Fax: +7 812 4493752

biolitec (M) Sdn. Bhd.

No.18, Jalan PJS. 7/21 · Bandar Sunway
46150 Petaling Jaya, Selangor D.E. · Malaysia
Phone: +603 56 32 71 28
Fax: +603 56 38 01 28

biolitec India Pvt. Ltd.

302B, 3rd Floor, Gold Tower, Residency Road
Bangalore 560025 · India
Phone: +91 80 2211 4955
Fax: +91 80 2211 4954

biolitec Ltd Sti.

Eski Uskudar yolu caddesi, Akay apartmanı · No:6 d:3
34752 Atasehir-Istanbul · Turkey
Phone: +90 216 574 7456
Fax: +90 216 574 7476

biolitec Inc.

515 A Shaker Road
East Long Meadow, MA 01028 · USA
Phone: +1 413 5 25 06 00
Fax: +1 413 5 25 06 11

biolitec B.C.I.E.L.

Rua Antonio de Barros, 2391 · Tatuapé
São Paulo, 03401-001 · Brazil
Phone: +55 11 2093 8602
Fax: +55 11 2093 8602

biolitec FZ LLC

B/P 49 Unit 306 · P.O. Box 505072
Dubai Healthcare City · Dubai · UAE
Phone: +971 44 29 85 92
Fax: +971 44 29 85 91

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www.biolitec.com

biolitec AG

Otto-Schott-Str. 15 · 07745 Jena, Germany

Phone: +49 3641 519 53 0 · Fax: +49 3641 519 53 33

E-Mail: info@biolitec.de · <http://www.biolitec.com>