

PROCTOLOGY

neoV Laser case study

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Case number 0703



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Patient Profile

The patient, a 29 years old male, arrived at the clinic on December 2015, reporting of anal pain for the last consecutive 10 days. On the day prior to the first appointment, the patient experienced discharge of pus. Review of the patient's clinical history presented no findings.

Examination showed a slight 2x1 cm sized swelling at 7-8 o'clock LP, a normal sphincter tension with internal infiltration at 8-9 o'clock.

Two days later a surgery in general anaesthesia took

place for evacuation of anal abscess and setting a silicone loop as a seton for drainage. 8 Weeks later the findings were a small external fistula opening at 8 o'clock with a seton in place. Endo-anal 3D ultrasound showed a trans-sphincteric fistula with an internal opening at 9 o'clock and the typical sharp double reflection of loop between the darker reflection of internal muscle and the brighter reflection of external muscle.

Treatment Course

Operative intervention occurred on February 2016 under general anesthesia as an outpatient

Surgical procedure. Bowel preparation was performed by administration of two carbon dioxide suppositories one hour before departure to the clinic. The course of anesthesia was started with administration of a single shot of antibiotics with cefuroxime and metronidazole, with goal of supporting inflammation control. Local anesthesia was administered around the external opening enabling better pain control post procedure.

A metal fistula probe was easily inserted into the fistula tract, ensuring that later insertion of the laser probe will be easy and straightforward. At this stage the seton could be removed. In a next step, the external opening was enlarged with diathermia to prevent external wound from healing too fast, and to facilitate drainage. Because of a well prepared fistula tract by seton without any inflammation or granulation tissue, no curettage or flushing of the fistula tract was required.

A special probe for fistula treatment (CORONA FISTULA PROBE, neoLaser, Caesarea Israel), containing a conical fiber within a special glass tip

was used. The conical internal fiber provides ring illumination of laser light, and is protected by the external glass tip, ensuring a gentle and uniform application of energy. The probe was introduced from outside into the fistula tract and pushed completely through the fistula, then pulled back slightly until the aiming beam light of the probe was level with the surface of the internal fistula opening. The probe was connected to a 1470nm laser (neoV1470, neoLaser, Caesarea Israel), and the laser was set to a power of 10 Watts with a single pulse of 3 seconds duration. The energy was delivered in single shots of 3 seconds. The probe was then pulled lightly until free from tissue, and pulled back until resistance of pasted fistula tract was felt. Consecutively, another pulse was administered in the same fashion, such that approximately each 5mm of lesion received a 3 second pulse, starting from the most distal position and pulling back to the proximal entry point.

After completion of the surgical course, the patient was awakened and placed in recovery for oversight. Two hours after completion of the procedure, the patient left the clinic and returned home.

Treatment Results

On day 1 post surgery the patient experienced slight pain that was managed with 30 drops of Metamizole. Bowel movement occurred normally. Visual examination showed a typical wound with slight detritus.

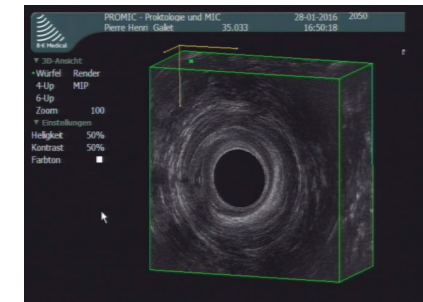
On day 7 post surgery the patient indicated short term high temperature on the previous two days and a short strong bleeding. On examination of the mostly

clean wound a little vessel was found as the reason for bleeding. It was coagulated while admitting 50% trichloric acid fluid.

Two month post-surgery a final examination was performed. The patient was very satisfied with the results. Discharge had stopped 2 weeks prior to the examination. The Fistula was complete closed.



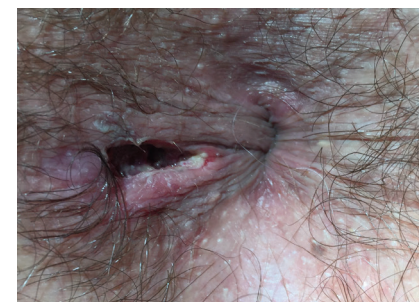
Preop Seton



Preop Ultrasound



Postop



Day 1 After Surgery



Day 7 After Surgery



2 Months After Surgery

Discussion

Laser Coagulation of Anal Fistula (LCAF) is a safe and effective alternative to common surgery of anal fistula with e.g. excision and sphincter reconstruction, plug treatment, fibrin glue, clip treatment or LIFT procedure. A primary benefit of LCAF is the safety of preserving muscle structures, thus preventing any risk for long term incontinence, which is a major potential complication. As a result, LCAF has gradually become the best alternative to open fistu-

la surgery in my practice. In cases of larger fistula tracts with cavities or significant granulation tissue it should be combined with curettage and flushing. Latest investigations showed no benefit for closing suture of internal opening. The LCAF procedure is easily tolerated and managed as an outpatient surgical procedure. When recurrence occurs, as it may happen in ~40% of cases, the same treatment is easily performed and well accepted by patients.