

# THD Doppler

Minimally invasive surgical treatment for hemorrhoids







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### THE THD SOLUTION:

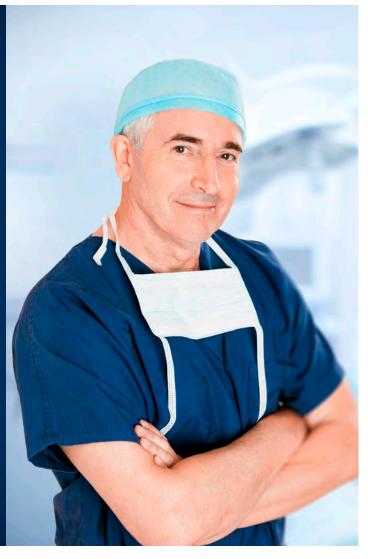
Hemorrhoidal arterial ligation and mucopexy are able to:

- reduce the arterial hyperflow
- lift in the prolapsed tissue
- restore anatomical and physiological status of the anal canal
- preserve sphincter integrity and continence

by reducing the arterial hyperflow to the hemorrhoidal plexus (thus this gaurging the hemorrhoidal tissue) and repositioning prolapse mucosa the anatomical conditions is restored.

This procedure has by now proved to offer durable results in Grade II, III and IV hemorrhoids with clear advantages in terms of:

- mild post-operative pain
- short recovery
- quick return to normal activities
- sphincter preservation
- can be performed even as a redo of previous procedures



### **UNTIL NOW:**

Hemorrhoidectomy (open or closed) was considered the surgical gold standard for treatment of hemorrhoids, is however marred by:

- important post-operative pain
- long recovery
- delayed return to normal activities
- rare but severe complications
- risk of impaired sphincter continence



# Doppler

To perform the THD® Doppler Method a combination of a Doppler and LED light source generator with a dedicated operative anoscope have been designed



### **BENEFITS**

#### **SAFE**

Because the procedure is performed under direct vision and because it's non-excisional, no severe complications have ever been reported in literature.

#### **FAST**

Cases are typically performed in 30 minutes or less.

#### **COST EFFECTIVE**

This being an outpatient procedure keeps cost down with low material cost combined with short hospital stay and limited pain medication.

### **THD® Doppler METHOD**

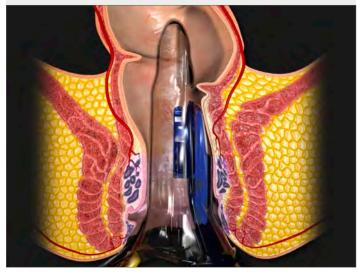
## 1 Dilation and device insertion

Dilate the anus by using a clamp to avoid that the prolapse goes back inside.



### **Z**Full device insertion

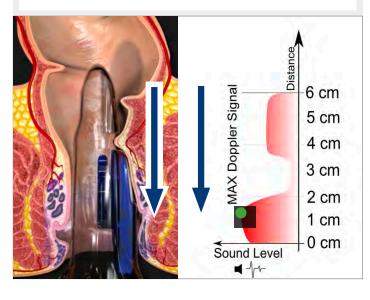
Introduce gently and deeply the proctoscope starting from a specific section (like 3 o'clock).



# **3**Optimal signal and marker-point finding

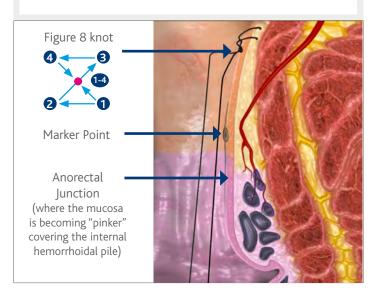
Retract and move distally the device searching for maximum Doppler signal, usually just above the anorectal junction.

The marker point is placed with an electrocautery (or a surgical marking pen).



## 4 Anchor point

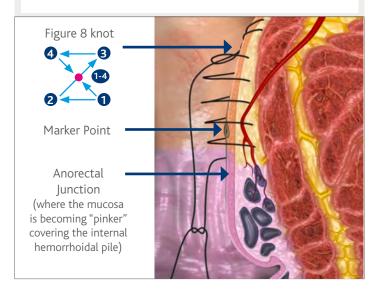
Complete reinsertion of the device and placement of the fixation stich as an anchoring point.



### THE BASIC STEPS

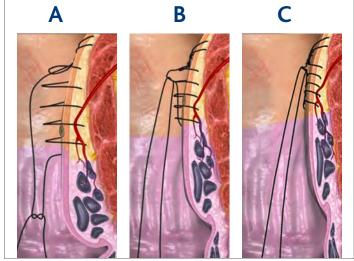
## **5** Running suture

Pull back the sliding part of the proctoscope to perform a continuous suture (5 mm between each bite) until the marker point inclusion and then reach the anorectal junction.



## 6 Prolapse lifting

Closing the knot, the prolapsed tissue will be lifted inside restoring the anatomical condition.



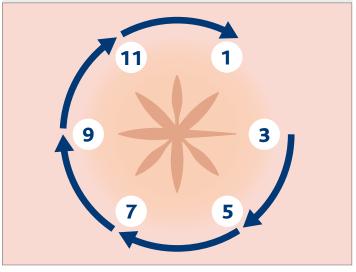
## **7**Device extraction

Gently extract the device protecting the mucopexy with a finger.



## **8**Repetition of the procedure

Repeat the procedure moving clockwise.



# **THD**Revolution



### **FEATURES**

All-in-one Doppler signal processor and LED light generator.

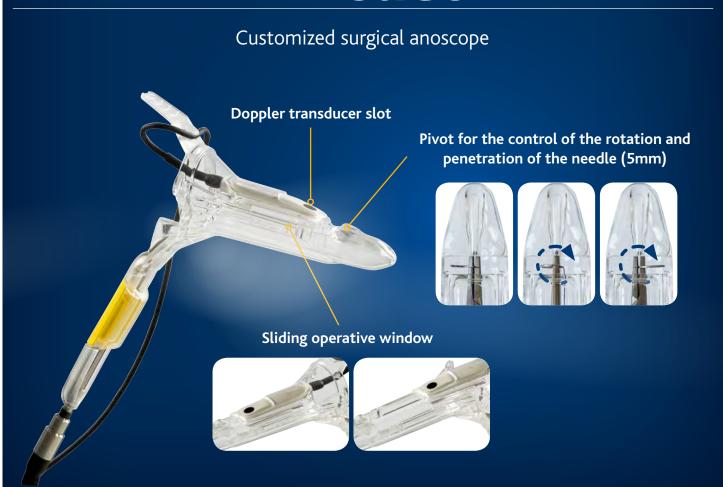
Highly sensitive continuous wave Doppler for an easy detection and location of the vessels to transfix and for a confirmation of the modified Doppler signal subsequent to the ligation.

Very bright illumination of the operative field.

Both the volume and the brightness are controllable by adjusting the knobs on the front panel.

An On / Off footswitch allows for muting the Doppler sound during the procedure once the vessel has been located.





### **FEATURES**

Operative anoscope specifically designed to perform the procedure.

Ergonomic handle also fitting the tip of the fiber optic cable for illumination.

A patented pivot in the front of the proctoscope allows for total control of the rotation and penetration (5mm) of the needle.

The operative window can be longitudinally incrementally extended by sliding the top of the proctoscope letting the operator perform a continuous suture pexy unimpaired by excessive prolapse falling down into the operative field.

Medical grade plastic allowing for clear vision of the operative field.



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