Non-cutting treatment for chronic pilonidal sinus

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1. OBJECTIVE OF THE TECHNOLOGY OR DEVICE.

The main objective of the proposed chronic pilonidal sinus is a non-cutting approach using circular dissector and enhancement of the wound healing based on the principle: development in the anatomic vicinity of the patient the missing tissue.

2. DESCRIPTION OF THE TECHNOLOGY AND METHOD OF ITS USE OR APPLICATION.

Many surgical techniques have been used in the treatment of pilonidal sinus incision and drainage for Acute Pilonidal Abscess, unroofing, curettage, and secondary healing, complex procedures from simple Karydakis flap, Bascom cleft-lift procedure to more complex flap procedures such as the z-plasty, V-Y advancement flap and other rotational flap techniques. The proposed novel approach stands out from conventional practiced techniques by using not only MIS but also the progress achieved in biotechnology and bioengineering.

Using flexible endoscope to remove hair follicles and ablating the fistulous tract with special circular knife. The proposed circular knife could be used for homogeneous layer by layer dissection of the fistulous tract. The space created by the dissection will be filled with liquid hydrogel at 0 degree will become gel at human temperature and blocking fistulas tract. Liquid hydrogel could be encapsulated with stem cells to reduce wound healing time. Hydrogel liquid could be also encapsulated with analgesics to relieve pain after surgery thus avoiding the side effects of narcotics.

3. PRELIMINARY RESULTS IF AVAILABLE.

Preliminary results are not available.

4. CONCLUSIONS/FUTURE DIRECTIONS.

The main ambitious objectives of the proposed treatment are three folds:

- Enhancement the healing process
- Improvement recurrence rate.
- Insuring painless wound in the post-op period.