



KEYSTONE FLAP FOR PILONIDAL SINUS DISEASE

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Introduction

- Simple excision
 - With primary closure
 - Marsupialization
 - Delayed closure
 - VAC
- Reconstructive procedures such as flaps
- Other Procedures
 - EPSiT
 - Medicated Seton (Ksharasutra)

Key stone flap (KF) Relatively a newer flap

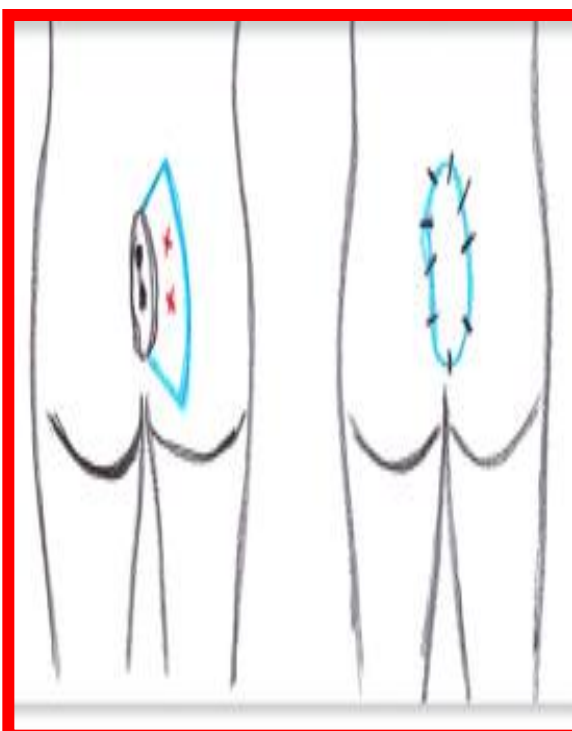
- ❖ Described by Behan in 2003
- ❖ Especially useful in cases where there are multiple pits in the mid line and just paramedian area.
- ❖ A curvilinear trapezoidal shaped flap, representing the architectural shape of the keystone in Roman arches, relying on randomly fasciocutaneous or musculocutaneous perforators.
- ❖ It represents two opposing V-Y flaps joined together, with a flap width at a 1:1 ratio to an elliptical defect. Its length is determined by the size of the wound.

Reconstructive Surgery

- Karydakis flap
- Rhomboid or Limberg
- Bascom (Cleft - lift)
- Z plasty
- Multiple Z plasty
- Gluteus maximus flap
- Key Stone Flap

Operative Procedure

- ❖ Patient under spinal anesthesia in Jack knife position.
- ❖ An elliptical incision, including all the pits and sinuses is made and excised up to sacral fascia.
- ❖ A flap paddle is raised from the side with a width of roughly equal width with corners at right angle, elevated and advanced to cover the defect. The donor site is closed primarily in two layers.
- ❖ A drain is placed. Skin is sutured with interrupted Prolene 2/0 or subcuticular sutures are placed.
- ❖ The flap obliterates the natal cleft



Material and Methods

- ❖ Total number of patients: 15
- ❖ M:F: 12:3
- ❖ Age: 18-36 yrs (mean 20 yrs)
- ❖ Duration of disease: 2-3 yrs
- ❖ Previous operation: 4 had incision & drainage
- ❖ Number of pits and sinuses: 3-4 pits
- ❖ Location of pits and sinus: majority in midline and paramedian area

Results

- ❖ Operating time: Approx 45 mins
- ❖ Blood Loss: Minimal
- ❖ Drain placement for 2-3 days
- ❖ Hospital stay: 2-5 days (average 3 days)
- ❖ Suture removal: 10-14 days
- ❖ Flap Necrosis: None
- ❖ Recurrence: None at maximum follow up of one year

Ref

- Behan FC. The Keystone Design Perforators Island Flap. ANZ J Surg 2003, 73 :112-120
- Caliser et al, Updates Surg 2021, 73: 2341-6
- Roatis et al. Inter J Clin Med. 2020, 11

Conclusion

- ❖ Apart from many other reconstructive procedures, Key Stone flap is another alternative available for pilonidal sinus, especially if the pits and sinuses are in mid line and paramedian area.
- ❖ Flap viability is good and it takes shorter time for operation as flap designing is relatively easy.