MANAGEMENT OF CHRONIC ACHILLES TENDON RUPTURE WITH MORE THAN 5CM DEFECT USING COMBINATION OF MULTIPLE SURGICAL TECHNIQUES

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INTRODUCTION

- The Achilles tendon is the largest tendon in the human body formed by union of soleus and gastrocnemius muscles.
- Achilles tendon tears commonly result from sports injuries, penetrating trauma or road traffic accidents.
- A rupture is considered chronic when it presents four to six weeks after initial injury.
- Ultrasonography of ankle is investigation of choice for diagnosis
- Surgical treatment options include end to end repair, tendon augmentation procedures, V-Y plasty, Krackow suturing and suture anchors, etc.

CASE REPORT

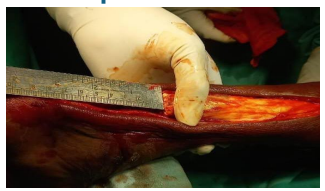
- A 55 years old male presented with left ankle pain and restricted movement following a trauma five months prior.
- Examination revealed localised swelling and defect of approximately 5cms noted near the heel with limited plantar flexion and Thompson test positive.
- Ultrasonography of ankle confirmed an Achilles tendon rupture.

OPERATIVE FINDINGS

The surgical procedure involved clearing fibrosis, tendon transfer using Flexor Hallucis Longus tendon to augment Achilles tendon, lengthening of proximal tendon with V-Y plasty, securing the technique with Krackow suturing and anchoring the distal part of tendon to the bone with cc screw.
Post operatively, the patient was placed in a plaster slab in plantar flexion.

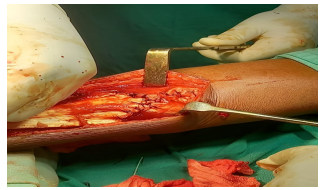
Incision over Achilles tendon

5cm gap present

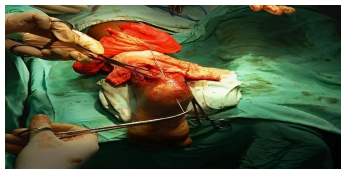


FHL tendon transfer

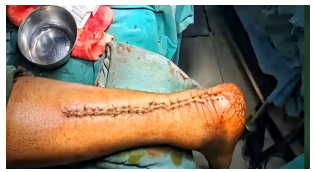
V-Y plasty



FHL to calcaneum



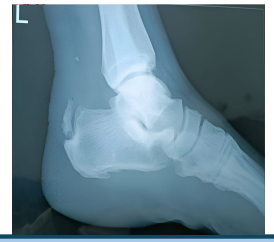
Skin closure



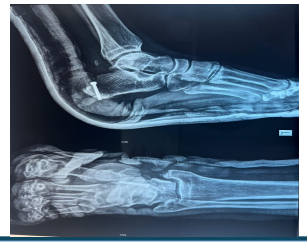
DISCUSSION

- Management of chronic rupture of Achilles tendon is debated, focusing on restoring anatomy and restoring functional outcomes
- Flexor Hallucis Longus transfer allows early weight bearing but carries risks like clawed hallux deformity and neurovascular injury.
- Chronic ruptures are diagnosed four to six weeks post injury, with symptoms like pain, stiffness and scar tissue formation complicating the repair
- Various reconstruction techniques include: Tendon transfer, gastrocnemius facial turn down flap, allograft or autograft reconstruction and synthetic graft augmentation
- Gastrocnemius fascial turn down flap is suitable for larger gaps but causes pain and weakness, making it less ideal as a first line option.
- V-Y plasty allows quicker revascularization and it is preferred for defects over 2 cm with restoration of full tendon strength compared to gastrocnemius flap, hence it is preferred for chronic ruptures.

Pre op x-ray



Post op x-ray



CONCLUSION

We used combination of surgical techniques in this case of Achilles tendon rupture with more than 5 cm defect resulting in excellent outcome achieving a full range of motion and un aided ambulation at 3 months follow-up.