Abstract: Tendoachilles Rupture is one of the most common problems in Asian subcontinent. Neglected TA rupture as well as Rerupture also is the most common problem. This is the retrospective as well as prospective study to assess the functional outcome of the patients who were undergone modified Teuffers procedure(Peroneus Brevis Transfer) for neglected rupture of TA cut. Methods -We have reviewed 13 patients who were undergone modified Teuffers procedure in our Kilpauk Medical College Hospital during the period of June 2008 June 2011 of which 7 male patients and 6 female patients in the age group of 20- 60 years. The technique which was used Modified Teuffer's. Functional outcome was analysed over the period of three years. Results -Wound healing delay or infection occurred in 2 cases without affecting final outcome. There was no rerupture in any case during follow up. Three patients had less than 3 cms calf atrophy, 2 patients had less than 10 degree restriction of ankle dorsiflexion. Patients were generally satisfied with the procedure and all of them had regained their normal preinjury daily activities. Conclusion -The technique of Peroneus brevis tendon transfer is strongly recommended to augment or bridge the gap in neglected rupture of TA cases.

Keyword: Neglected rupture of Tendoachilles ,Teuffer procedure , Peroneus Brevis.

Introduction: Tendoachilles rupture is most common musculotendinous injury. Various methods to treat chronic TA rupture. Peroneus Brevis tendon transfer augmentation is one of the most popular method known as Modified Teuffer procedure. We evaluated the functional outcome of patients who were undergone Modified Teuffer procedure.

Materials & Methods: We defined the neglected TA rupture by more than 3 weeks old, partial & complete rupture, old degenerated tendon, rupture due to steroid injection into the tendon sheath. This is the retrospective study based on the perusal of the operation register and case notes of the Orthopaedic Department of Kilpauk Medical College Hospital and review of the patients between June 2008 to May 2010. The hospital records of the 9 patients were studied and the patients were followed up for functional outcome of the surgery. 4 patients were undergone surgery during the period of June 2010 to June 2011 and those patients were studied prospectively. Inclusion criteria were more than 3 wks old rupture, partial & complete rupture, closed & scarred wound, Calcified degenerated tendon. Exclusion criteria were less than 3 wks old , Infected TA rupture, Tip toe walking patients.

Surgical Technique: Through posterolateral skin incision expose the tendoachilles. Identify and retract the sural nerve. Through a small second incision detach the peroneus brevis from the base of 5th metatarsal base. Incise the lateral septum and draw the peroneus brevis tendon through first incision. Take the tendon from lateral to medial side through hole in the distal stump of tendoachilles and suture it back to the tendoachilles with multiple interrupted non absorbable suture. Close the tendon sheath and subcutaneous tissues with nonabsorbable suture. Close the skin and apply a sterile dressing and a short leg cast in gravity equines.

CASE 1 PER OP

CASE 2 PER OP
Results:
There were 13 cases of neglected TA rupture. 7 male & 6 female patients in the age group of 20 – 50 years. Final outcome was analysed over the period of three years. Mean age was 35 yrs, males - 36.2 yrs, females – 41.5 yrs. Duration of rupture: 5 – 12 wks (4 patients), 12 – 18 wks (5 patients), 18 – 24 wks (4 patients). One patient had calcified tendon, 4 patients due to post steroid injection, 8 patients due to direct trauma (due to neglected and rerupture). All patients underwent Modified Teuffer procedure. Out of 13 cases functional evaluation was assessed by KAIKKONEN SCORE (AJSM,1994;22:462)

Excellent results – 3, Good results – 8, Fair – 2
Post op Skin necrosis – 2 (later treated with skin cover), Stiffness of ankle joint – 2, Restriction of ankle dorsiflexion – 2

Discussion:
Wide separation of ruptured ends of TA is common in our region people because increased dorsiflexion of ankle while squatting. Even though so many methods are available like Wapner FHL tech, Bosworth tech, Abraham tech, this modified Teuffer tech is best used for widely separated TA rupture. Repair is best accomplished by small incision and by Peroneus Brevis tendon transfer. Also less chance of injury to sural nerve & short saphenous vein. Moreover it allows early skin closure and less chance of skin necrosis. Strength and function of ankle & push off are achieved earlier and are better. An ongoing controversy is non-phasic transfer of Peroneus Brevis tendon transfer. Eventhough it is a non phasic transfer functional outcome is very very good. It provides living, dynamic and vascular reinforcing structure.

Conclusion:
In conclusion we found that Peroneus Brevis tendon transfer is the best method of tendon transfer in chronic as well as neglected rupture of Tendoachilles.
References:
1. TA rupture – results of Perones Brevis tendon transfer vol 37, No 3, July 2003 JBJS. Z S Kundu, S S Sangwan et al
2. Repair of Neglected Rupture of TA by using Peroneus Brevis tendon transfer. Mohamed M zamzam et al