

## Double Tendoachilles in One Leg

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### Introduction

Poliomyelitis is still one of the common causes of childhood disability in a developing country like India. There are thousands of neglected (chronic) cases of post polio residual paralysis, who are crawling in the villages and are unable to stand and walk due to paralysis of the lower limb. Rotary International has made an endeavor to provide free polio corrective surgery facilities in collaboration with Department of Physical Medicine & Rehabilitation, King George's Medical University, Lucknow to these poor and needy disabled at their door step in six districts of Eastern Uttar Pradesh. Surgical camps were organized from January 2004 to March 2004 and in more than 500 cases, Polio corrective surgery was performed.

During one of the such Polio corrective surgery camp at Hindalco Hospital, Renukoot, District Sonbhadra in March 2004, we came across a very rare and abnormal presentation of Tendocalcaneus (TC) i.e. double tendocalcaneus instead of one while operating a case of equinus deformity due to post polio residual paralysis in left lower limb.

### Case Report

A 12 year old male presented with the problem of paralytic equinus deformity of left ankle. He was having post polio residual paralysis of left lower limb for the last ten years. The motor power around left hip and knee was satisfactory. His dorsiflexors (Left) were weak and plantar flexors were strong. He was ambulating in equinus for the last nine years. He was screened in the polio corrective surgery camp for lengthening of tight tendocalcaneus. During surgery we found two strong well built, parallel and separate tendocalcaneus attached to calcaneus distally.



*Per-operative photograph showing double TA*

We did not find plantaris tendon. The 'Z' plasty of both tendocalcaneus along with posterior capsulotomy of the ankle was performed while foot was passively dorsiflexed (above 90°). The cut tendons were stitched, subcutaneous sutures were applied and followed by skin sutures. Above knee plaster was done while knee was in 30° flexion and foot in dorsiflexion.

### Regional Anatomy

The muscles of the calf are divisible into a superficial and deep group, each lying in its own fascial compartment. The muscles of the superficial group are the gastrocnemius, soleus and plantaris. They all insert on the back end of the calcaneum and the gastrocnemius and soleus share the same tendon of the insertion. The small plantaris muscle arises from the lateral epicondyle of femur, its muscular belly is nearly 5-10 cms long but its slender tendon is very long, passes between the gastrocnemius and soleus to insert on the calcaneus anteromedial to tendocalcaneus.

### Discussion

A very rare presentation of double tendocalcaneus in one extremity is reported. We are not sure whether this presentation is due to hypertrophy of the plantaris tendon or it is an entity due to lack of fusion of tendocalcaneus.

This abnormal presentation of tendocalcaneus has not been observed in the esteemed Text Book of Gray's Anatomy (38<sup>th</sup> edition). However, Daseler and Amson (1943) had reported that the plantaris muscle is sometimes double and it is absent in about 10% of the cases. Further this type of variation has not been reported in the Text Book of Anatomy for Surgeons (3<sup>rd</sup> ed.) and also in Functional Anatomy of limbs and back (5<sup>th</sup> ed.) by Hollinshead as well.

### References

1. EH Daseler and Amson BJ. The plantaris muscle, an anatomical study of 750 specimens. J. Bone and Jt. Surg. 1943;25:822-7.
2. PL Williams. Gray's Anatomy, 38<sup>th</sup> Ed., Churchill Livingstone:Edinburgh, London, 1999; 884-6.
3. W Henry Hollinshead. Anatomy for surgeons, the back and limb. 3<sup>rd</sup> Ed. Harper and Row Publishers, Philadelphia, 1982.
4. W. Henry Hollinshead and D.V. Jenkins (1981). Functional Anatomy of the limbs and back. 5<sup>th</sup> Ed. W.B. Saunders Co., Philadelphia, 1981; 296-9.