CASE REPORTS

PERONEUS LONGUS TENOSYNOVITIS

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ABSTRACT

Tenosynovitis of the tendon of peroneus longus has rarely been described in the literature (Aberle-Horstenegg, 1932; Burman and Lapidus, 1931). This is a report on the condition in two athletes and in one of whom the os peroneum was absent on the side of the tenosynovitis. It emphasises the importance of a detailed review of athletes' training patterns when assessing their injuries.

Key Words: Peroneus Longus: Tenosynovitis: Athlete: Ankle.

CASE No. 1

A twenty-seven year old female middle distance athlete presented with an eighteen month history of recurrent right lateral foot pain. Described as an aching cordlike sensation at the outer border of the foot, the condition was aggravated by training. The onset on each occasion was gradual and although she attempted to continue training, pain only abated after rest for three to four days. Past history of injury to the right foot revealed repeated inversion injury to the ankle which on three occasions necessitated immobilisation, the last occasion five years previously. On examination there was mild oedema and tenderness to palpation extending onto the sole, a short distance behind the styloid process of the fifth metatarsal. Radiographic examination with stress views revealed no abnormality of the right foot but did show the presence of an os peroneum in the uninjured left foot and the absence of this accessory bone in the injured right foot. A diagnosis of tenosynovitis of the right peroneus longus tendon was made and was managed conservatively with ice, rest, ankle exercises progressing to a gradual return to running with advice on training patterns.

CASE No. 2

A twenty-eight year old male runner presented with pain under the outside of his right foot the day following his participation in a twenty mile road race, completed in 2 hrs 40 mins. He had no past history of injury to this foot. On examination there was tenderness over the cuboid bone extending onto the sole of the foot. Treat-

ment was initiated with ice and rest with a gradual return to training.

Right foot. Symptomatic. No sesamoid.

The occurrence of overuse injuries is becoming exceedingly more frequent with the increased numbers of joggers and runners now participating in sport. Proper advice and management of injuries and training programmes can help lessen the incidence of chronic problems developing.

DISCUSSION

Five cases similar to those presented here, with pain localised where the tendon of peroneus longus passes under the cuboid bone and with the absence of an os peroneum have been described (Aberle-Horstenegg, 1932). In a review of the functional disturbances caused by the inconstant bones of the foot four patients presented with pain at the lateral border of the foot a variable distance behind the styloid process of the fifth metatarsal; in two of these the os peroneum was absent (Burman and Lapidus, 1931). Stenosing tenosynovitis of the tendon of peroneus longus has also been described (Burman, 1953; Hackenbroch, 1927; Parvin and Ford, 1956).

Left foot AP and lateral. Asymptomatic. Sesamoid in Peroneus longus.

The past history of inversion injury and the absence of an os peroneum must be considered important factors in the development of the peroneus longus tenosynovitis. Inversion injury of the ankle joint has resulted in damage to the peroneal tendons (Abraham and

Stirnman, 1979; Davies, 1979; Evans, J. D. 1966). The close relationship of the deep surface of the peroneal sheath to the calcaneofibular ligament has been demonstrated (Brostrom, 1964). Ruptures of the calcaneofibular ligament are often associated with tears in the wall of the peroneal sheath (Evans, G. A. and Freyno, 1979). The role of the os peroneum and the other accessory bones of the foot has been extensively reviewed. Although their functional importance in man is not fully understood, they are thought to diminish friction, modify pressure and alter the pull of a muscle (Bizarro, 1921). The incidence of occurrence of the os peroneum varies from 5% to 14.3% (Bizarro, 1921; Burman and Lapidus, 1931).

Analysis of the athletes' training schedules showed sudden changes in training pattern prior to the development of the lateral foot pain, for example in October following a rest period at the end of the track season the girl described as Case 1 had recommenced training at high mileage road running of 60 to 70 miles per week. Similarly in May there was increasing use of the tartan track for interval and speed sessions. These abrupt changes in phase, surface and type of training were precipitating factors in the development of her tenosynovitis; gradual changes in all aspects of the training programme prevented this development.

This runner had begun serious running eight months previously. Prior to that he ran 2-3 miles about three times a week. His first marathon was completed in 4 hours six months previously. His longest training run before the twenty mile race was 10 miles. With advice on training and the inclusion of runs between 15 and 20 miles in training this runner completed his next marathon in 3 hrs 37 mins and has just recently run a sub-three hour marathon. He has had no further episodes of the presenting foot pain.

This report emphasises the need for a detailed review of training schedules in the diagnosis and management of stress injuries in athletes.

REFERENCES

- Aberle-Horstenegg, W., 1932 "Ueber einen eigenartigen Fußschmerz. (Tendovaginitis der distalen Schnenscheide des Peroneus longus)". Münchener Med.Wohnschr. 79: 946-948.
- Abraham, E. and Stirnman, J. E., 1979 "Neglected rupture of the peroneal tendons causing recurrent sprains at the ankle". Case report. J.Bone and Joint Surg. 61A (8): 1247-1248.
- Bizarro, A. H., 1921 "On sesamoid and supernumerary bones of the limbs". J.Anat. 55: 256-268.
- Brostrom, L., 1964 "Sprained ankles, I. Anatomic lesions in recent sprains" Acta Chir.Scand. 132: 537-550.
- Burman, M. and Lapidus, P. W., 1931 "The functional disturbances caused by the inconstant bones and sesamoids of the foot". Arch.Surg. 22: 936-975.

Burman, M., 1953 "Stenosing tenovaginitis of the foot and ankle". Arch.Surg. 67: 686-698.

Davies, J. A. K., 1979 "Peroneal compartment syndrome secondary to rupture of the peroneus longus". Case report. J.Bone and Joint Surg. 61A (5): 783-784.

Evans, G. A. and Freyno, S. D., 1979 "The stress tenogram in the diagnosis of ruptures of the lateral ligament of the ankle". J.Bone and Joint Surg. 61B (3): 347-351.

Evans, J. D. 1966 "Subcutaneous rupture of the tendon of peroneus longus". Report of a case. J.Bone and Joint Surg. 48B (3): 507-509.

Hackenbroch, M., 1972 "Eine seltane Lokalisation der stenosierende Tendovaginitis (an der Sehenscheide bei Peroneen". Münchener Med.Wohnschr. 74: 932.

Parvin, R. W. and Ford, L. T., 1956 "Stenosing tenosynovitis of the common peroneal sheath". J.Bone and Joint Surg. 38A (6): 1352-1357.

BOOK REVIEW

Title: OUTDOOR PURSUITS FOR DISABLED PEOPLE
Editor: Norman Croucher, OBE
Publisher: Woodhead-Faulkner for The Disabled Living Foundation, 1981
 Price: £5.55 Paperback £7.95 Hard cover 180 pages

For anyone interested as well as those involved with disabled people this is a very worthwhile book not only for the valuable and useful information which it contains but also for the philosophy and attitudes to disability and the disabled which runs as a basic theme throughout the whole book. This is also true for disabled people themselves.

The book is divided into six parts and five appendices. Part one is titled "Before You Start" and deals with "Medical Aspects" and "Instruction and Equipment". This gives a sound and reasoned account of the medical aspects well balanced between sensible caution and the spirit, the enjoyment and excitement of the challenge of sport and participation. It also emphasises as does the whole book, that medical and other advice must be "informed" advice. Part two deals with activities on land, underground and in the air: part three activities on and under the water: part four activities in the snow. These parts give a very good account of the ever increasing number of outdoor activities that disabled people can pursue, and are pursuing. These accounts give the nature of the sport and its requirements and relates them to disability, gives advice and where further and more detailed information can be obtained. Part five concerns out-door Centres and courses that are available and part six holidays, travel and transport, insurance, inspiration and integration and the future and contains useful practical information and thought on development. The first four appendices deal with national and other organisations and a note to teachers. Appendix five gives a classification of disability and relates this, in a chart, to suitability of some of the activities described in the text. In introducing the chart the dangers of generalisation in this matter and the need for common sense are pointed out. The importance of not reading the chart in isolation from the rest of the book is stressed.

As a catalogue or guide it is excellent to have on the bookshelves of all those concerned with helping the handicapped, especially in this "Year of the Disabled".

G. G. Browning