Acta orthop. scand. 45, 158–160, 1974

Fifth Orthopaedic Department, "St. Paul" Accident Hospital, Kifissia, Greece.

JUVENILE APONEUROTIC FIBROMA

Report of a Case

P. K. VATOPOULOS, E. E. GAROFALAKIS & B. T. PAPATHANASSIOU

Accepted 7.v.73

This rare condition was first described by Keasbey in 1953. The author noted its predilection for children, its tendency to recur after excision and the lack of metastases. The lesion is characterized on a microscopic level by proliferation of connective tissue cells, with parts of it showing calcification and a cartilaginous differentiation of a varying degree.

Lichtenstein & Goldman (1964) regarded this lesion as being the cartilage analogue of fibromatosis. Harrison in 1971 referred to the disease as being rare, a fact illustrated by a review of the literature which revealed only 15 similar cases.

This paper deals with another case of "juvenile aponeurotic fibroma", the first to be described in Greece.

CASE REPORT

In 1967 a fourteen-year-old boy started complaining of pain in the middle of the medial aspect of the left foot. The pain was elicited by local pressure and was intense enough to hinder walking.

Three years later and elsewhere, he underwent a biopsy, the report of which could not be traced. Nevertheless, the pain and disability reappeared after a short time and the patient was admitted to our Department in July 1971.

On examination he was a well developed, healthy adolescent who walked with a limp. Movements of the left foot were normal and painless. Muscle power was normal. Sensation of the foot was normal. A 6 cm long surgical scar was noted in the middle of the medial aspect of the left foot. On palpation a very sensitive area measuring 2 cm in length was discovered in the middle of the scar. There existed no physical findings of infection and the lymph nodes of the extremity were not enlarged. Blood chemistry was normal and the roentgenographic examination of the foot was negative.

Exploration of the lesion was decided upon. General anaesthesia and a tourniquet were used. Through a 6 cm longitudinal incision centred over the sensitive area of

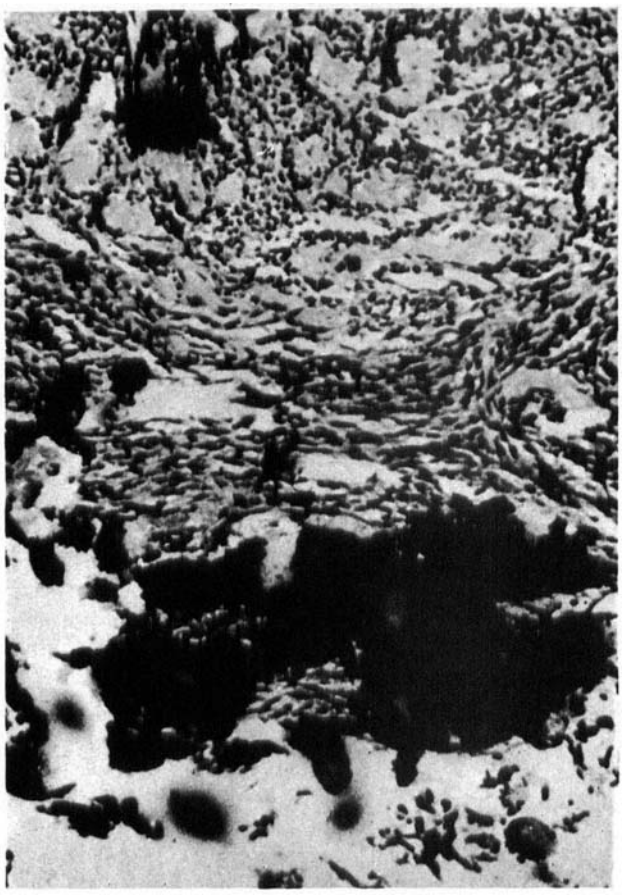

Figure 1. Extensive calcification together with spindle-shaped cells.

the foot, a well-circumscribed nodule was approached and was found adherent to the medial border of the plantar fascia. The nodule was carefully excised and the wound sutured. The post-operative course was uneventful.

The specimen was white-grey, firm, and measured 1.5 cm at its greatest diameter.

Two stained slides with tissue material from the specimen were sent to the Department of Pathology of the Royal Postgraduate Medical School, London.

The report, by Prof. Harrison, reads: "... Series of small roughly rounded cellular areas separated by looser and less cellular tissue. The lesion has surrounded some strands of original collagen fibre. The cellular part consists of haphazardly-arranged spindle-shaped cells. Mitotic figures are present but not frequent. Inflammatory cells were not seen. Parts of the tumour are quite extensively calcified (Figure 1).

In my opinion this is a calcifying juvenile aponeurotic fibroma. These lesions may recur after excision but they do not metastasise".

No other measures were taken after diagnosis was established and the patient was followed up in the Clinic. At the time of his last examination, sixteen months postoperatively, the patient had no complaints, walked normally and there were no physical signs of recurrence.

COMMENT

The aetiology of this condition remains unknown.

The review of the literature by Rios-Dalenz et al. (1965), revealed that both sexes are equally affected and that the lesion shows a predilection for the hand.

It usually causes very few symptoms, although in our case local pain was strong enough to cause limping.

It could be postulated that incomplete excision of the lesion is responsible for the local recurrences.

SUMMARY

A case of juvenile aponeurotic fibroma of the foot is presented. Surgical excision was performed. Follow-up of the patient revealed no recurrence.

REFERENCES

Harrison, C. V. (1971) Personal communication.

Keasbey, L. E. (1953) Juvenile aponeurotic fibroma (calcifying fibroma) a distinctive tumor arising in the palms and soles of young children. *Cancer (Philad.)* **6**, 338–346.

Lichtenstein, L. & Goldman, R. L. (1964) Cartilage tumours in the soft tissues particularly in the hand and foot. *Cancer (Philad.)* **17**, 1203–1208.

Rios-Dalenz, J. L., Kim, J. S. & Mc Dowell, F. W. (1965) The so-called juvenile aponeurotic fibroma. *Amer. J. clin. Path.* **44**, 632–635.

Correspondence to:

P. K. Vatopoulos M.D.
Fifth Orthopaedic Department
"St. Paul" Accident Hospital
Kifissia, Greece