EQUINUS DEFORMITY DUE TO HAEMANGIOMA OF CALF MUSCLE

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Joint deformity secondary to extensive haemangiomatous involvement of the soft tissues has been well described and is easy to diagnose. If the haemangioma is small, localised and within the belly of a muscle the diagnosis is more difficult. In equinus deformity of obscure aetiology localised calf tenderness may be the only diagnostic sign. Three children with equinus deformity caused by a small haemangioma in the calf muscles were treated by simple excision with satisfactory results.

Haemangioma of the soft tissue of a limb may cause joint deformity. If the malformation is extensive and involves the skin and subcutaneous tissue, the diagnosis is usually obvious.

Recently, three cases of marked equinus deformity of obscure aetiology have been seen at the Hospital for Sick Children in Toronto. The cause in each case was a small circumscribed cavernous haemangioma in the calf muscle.

CASE REPORTS

Case 1—A girl aged nine had complained of cramps in the left calf for three years. There were two centimetres of calf wasting and 20 degrees of fixed equinus. An ill-defined tender mass was palpable in the mid-calf. Radiographs showed a small area of scattered calcification in the soft tissue.

At operation a well-defined vascular tumour, four centimetres by five centimetres, was excised. Histological examination showed it to be a cavernous haemangioma confined to muscle.

Three months after operation she had regained an almost full range of movement and was free from pain.

Case 2—A girl aged six had had an equinus deformity of the right ankle for a year. Manual stretching for six months had brought no improvement. The calf was wasted by two centimetres and the equinus deformity measured 50 degrees (Fig. 1). A discrete tender area was found in the mid-calf but the patient did not complain of pain. A mass was not present and the radiographs were normal.

At operation a cavernous haemangioma measuring four centimetres by six centimetres was found within the belly of gastrocnemius (Fig. 3). The tumour was excised and recession of the gastrocnemius was carried out at the musculo-tendinous junction.

At follow-up four months later the patient showed a normal range of ankle movement (Fig. 2).

Case 3—A boy aged nine was referred for investigation of calf wasting and contracture. He had complained for six months of pain behind the right knee brought on by standing for long periods. The pain was relieved by rest. There were three centimetres of calf wasting and a 40 degrees equinus deformity (Fig. 4). A tender area was identified, with difficulty, in the lateral head of gastrocnemius. A definite mass could not be felt. The radiographs were negative.
At operation a cavernous haemangioma was excised from within the lateral head of gastrocnemius.

Follow-up examination three months after operation revealed slight restriction of ankle dorsiflexion (Fig. 5).

DISCUSSION

Haemangioma of skeletal muscle has been reported many times and has been the subject of numerous reviews (Davis and Kitlowski 1930; Jenkins and Delaney 1932; Shallow, Eger and Wagner 1944; Jones 1953; Scott 1957; La Sorte 1960). It was believed by most of these writers that the original description was by Liston in 1843, when he described an erectile tumour of the popliteal space.

Josefsson (1937) reported a case very like the three described in this paper; a twelve-year-old girl had had pain and tenderness of the calf for six years with an equinus deformity and much wasting of the calf muscles. An ill-defined mass was palpable in the upper calf which was extremely tender. The radiographs were normal. At operation a cavernous haemangioma twenty centimetres by four centimetres was found in the belly of the soleus muscle and was excised. After lengthening of the tendo-calcaneus later there was a good result.

In a review of the literature Josefsson had found reports of nineteen similar cases dating back to Putti in 1906.

A haemangioma confined to the calf muscle can cause calf wasting and equinus contracture. The diagnosis may be missed unless a diligent search is made for a discrete tender area in the muscle belly. There may not be much pain and the mass may not be palpable. Neurological causes of muscle wasting and contracture should be ruled out; two of the three cases described here were referred by a neurologist. Flecks of calcification seen within the tumour on radiography are uncommon but highly suggestive of haemangioma.

Local resection seems to have been curative in the three cases reported here although the follow-up period is short. The literature also indicates that, if resection is adequate, recurrence is unusual.

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REFERENCES


