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# An Experience of Ischemic Limb Salvage Associated with Myositis Ossificans of the Left Thigh

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## ABSTRACT

A case of ischemic limb salvage associated with myositis ossificans of the left thigh in a 66-year-old man was reported. The patient had a medical history of cerebral palsy and a cervical spinal cord injury, and had an operative past history of hip arthroplasty for fracture of the left femoral neck 10 years before. He showed ischemic symptoms such as paleness, coldness, and loss of the left dorsal arterial pulsation in the left toe, and had a rapidly growing mass in the left thigh. Roentgenography and computed tomography showed a mass 10 cm by 10 cm by 8 cm in size with severe calcification in the left quariceps muscle. Occlusion of the left common femoral artery was found in the arteriogram. Surgery was carried out in order to establish an accurate diagnosis and to rescue the left lower limb. The arterial pulsation was recovered as the result of completely resecting the left quariceps muscle tumor . The pathohistological diagnosis was of myositis ossificans in the quariceps muscle of the thigh. Etidronate disodium was administered in order to prevent a recurrence postoperatively. The patient has been well for the 13 months since surgery.

***Key words***: *Limb salvage, Myositis ossificans*

## CASE REPORT

A 66-year-old male was admitted to our hospital on October 20th 1992 with severe coldness of the left toe and a rapidly growing mass in the left inferior limb. In his medical past history dementia had occurred from his childhood due to cerebral palsy, hip arthroplasty had been performed for the fracture of the head of the left femoral neck 10 years before, and paraplegia in flexion had been recognized after a cervical spinal cord injury 5 years before. Physical examination of the left limb revealed that contracture was severe, that the arterial pulsation in the dorsal artery of the foot was not clear, and that an elastic hard mass 10 cm by 10 cm in size was palpable in the inguinal portion. Ischemic symptoms such as paleness and coldness of the foot was clear in the limb. Roentgenography of the lower limb showed no abnormalities in the femur bone but revealed calcification in the soft tissue of the inguinal portion (Fig. 1). Computed tomography of the pelvis and femur showed that a mass approximately 10 cm by 10 cm by 8 cm in size was located in the

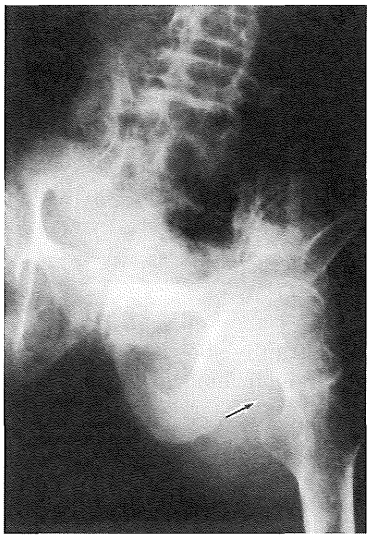

**Fig. 1.** Roentgenography of the lower limb showing some calcification in the soft tissue of the inguinal portion (arrow).

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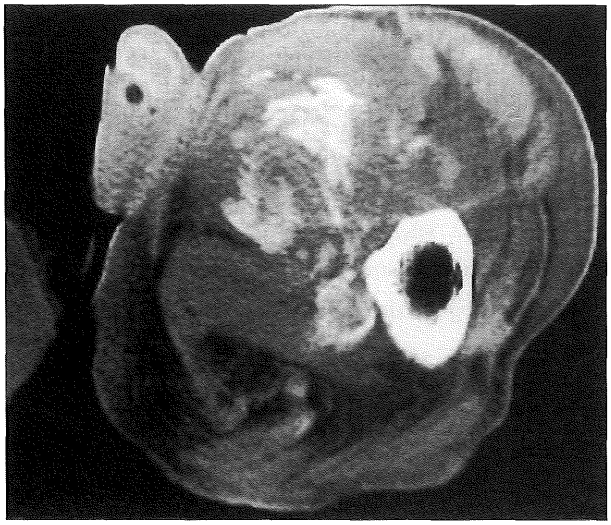

**Fig. 2.** Computed tomography of the pelvis and femur showing that a mass approximately 10cm by 10 cm by 8cm in size was located in the quariceps muscle of the thigh, and that the mass consisted of severe calcification.

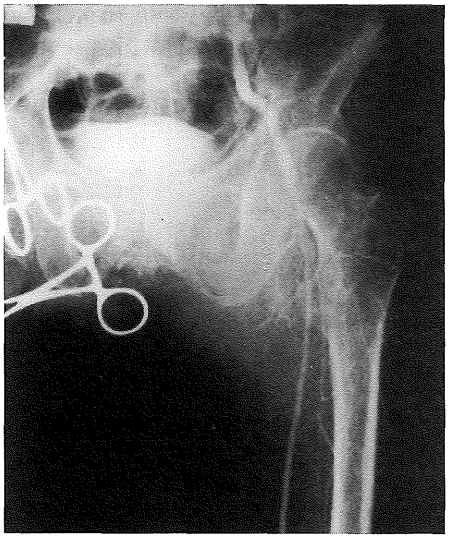

**Fig. 3.** Arteriography showing that the stenose was 75% in the common femoral artery.

quariceps muscle of the thigh, and that the mass consisted of severe calcification (Fig. 2). Arterial occlusion was suspected on the result of 0.1 of ankle-popliteal index. Arteriography showed that the stenose was 75% in the common femoral artery (Fig. 3). A Few colateral arteries flowed inferiorly from the left internal iliac artery. The artery fed the mass was not clear. Laboratory examination showed only a high level of serum alcaliphosphatase and calcium.

Surgery was carried out in order to establish an accurate diagnosis and to rescue the left lower limb. The tumor was rigidly attached to the quariceps muscle, and grew so anteriorly that the common femoral artery was stenotic. Arterial pulsation was recovered as the result of detaching the tumor from the femoral artery, and the quariceps muscle involving the tumor was resected completely.

The Pathohistological diagnosis was of myositis ossificans in the quariceps muscle of the thigh.

There was no trouble in the postoperative clinical course. Etidronate disodium was administrated in order to prevent a recurrence. The patient has been well for the 13 months since surgery, and there is no evidence of a recurrence in the left thigh.

## DISCUSSION

Arterial occlusion associated with myositis ossificans is a rare condition. There is no report in the English literatures of ann case of ischemic symptoms of the extremities due to myositis ossificans.

Myositis ossificans is a benign condition of heterotopic bone formation in the skeletal muscle of the extremities[1,3]. It is a generalized term for 2 separate clinical entities[3]. One is congenital myositis ossificans (myositis ossificans progressiva), a miserable clinical course, known as "stone man", which presents a progressive systemic sclerotic lesion in the skeletal muscles. The other is acquired myositis ossificans which involves a traumatic form, non-traumatic form, or neurotic form. the present case was of acquired myositis ossificans caused by either traumatic or neurotic degeneration of the muscle of the left thigh.

Myositis ossificans is often misdiagnosed as other soft tissue tumors, because both conditions show inflammatory phenomena[3]. Thus, differential diagnosis of myositis ossificans from other tumor lesions of the bone and soft tissue tumors, especially extra skeletal bone sarcoma is important. Roentgenography is sometimes helpful for ruling out bone tumor when the osperitoneal reaction is not clear. Computed tomography and magnetic resonance images are contributive both for diagnosis and survey, because they show the progressive peripheral calcification typical of myositis ossificans[4]. But in the literature accurate diagnosis is usually achieved only by biopsy or surgery.

Surgery will performed for cases which include symptoms associated with arterial obstruction and nerve compression, because the lesion is clinicopathologically benign.

The clinical effects of etidronate disodium (EHDP) for heterotopic bone formation is recognized in several reports[2,5]. EHDP, absorbable to hydroxyapatite, prevents bone formation, and postoperative administration in the neurotic- and

traumatic-forms of myositis ossificans has proved effective, since the possibility of postoperative recurrence is significantly reduced[2,5].

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