Severe severe psychological repulsion reaction in patient with PAD resulted in natural lower extremity mummification

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Summary
This case report describes the very uncommon event of mummification of the lower limb occurring naturally in a patient with peripheral arterial occlusive disease aggravated by severe reactive aversion and serves as a warning that this can happen in cases of untreated advanced critical limb ischemia even in well developed countries.

Key words: Lower limb mummification, atherosclerosis, critical limb ischemia, amputation.

Introduction
The patient BK, female, age 68, a university professor in human sciences, was admitted to the department on May 31, 2007. Just before the admission she was examined by a general practitioner who diagnosed the necrosis of the left lower limb below the knee level. The patient was immediately transported to the hospital by family members. On admission mummification of left lower limb beginning 10 cm below the knee was found with clear demarcation and significant edema of the hip (Figure 1). There were no femoral pulses in the left groin. On the opposite extremity femoral artery pulses were palpable and there was massive edema of the leg, but no signs of ischemia. RR 130/80 mmHg, HR 50. The patient denied any history of surgery, cardiovascular incidents, hypertension or diabetes. She was a heavy smoker with about 60–80 cigarettes per day for at least 40 years. The first onset of the rest pain had started approximately 6 months before admission. The patient had never been referred to a physician or any other medical professional until the day of admission. She was frightened by the continuing darkening and shortening of her leg and likened the rest pain to a “salt bracelet”. The actual state of the extremity had been noticed by the patient since the end of December 2006. Until April 2007 she had remained professionally active full time as university professor. She had treated her left leg with aloe vera ointments and the constant use of accessible non steroid anti-inflammatory drugs, with increased cigarette smoking and sporadic use of alcohol to reduce the pain level. Blood morphology and biochemistry at admission did not reveal any significant changes. Renal function was normal.

Immediate infrarterial digital subtraction angiography from a right femoral approach was performed and revealed an occlusion of the left iliac artery and the left superficial femoral artery. The popliteal artery and profunda femoral arteries on the left side were patent (Figure 2 A–E). Due to good demarcation of necrotic tissue the immediate decision for primary amputation without revascularization was made. The leg was amputated at the mid portion of the thigh with primary closure of the stump.
Amputation resulted in complete pain control and a significant reduction of the edema of the opposite leg, which was the result of several months of sitting and immobility. Psychiatric assessment revealed no organic mental disorder, but the patient was found to have a severe psychological reaction of repulsion consequent to cognitive dissonance. In the postoperative period the patient was treated with enoxaparin 40 mg s.c per day, ASA 75 mg daily and simvastatin 40 mg daily and with a routine program of physical rehabilitation for amputated patients. Patient was discharged with good healing of the stump on the 5th day after surgery. Out-patient follow-up was conducted until the moment of prosthetic replacement of the left lower limb. The distance of claudicating of right lower extremity was recorded as 300 meters with no need for vascular reconstruction.

Discussion

Although critical limb ischemia is common, natural cases of mumification of the extremity as a consequence of PAD are rarely described in developed countries (4). Progress in screening and treatment of PAD allows for early reaction and treatment implementation (4). Advanced stages of PAD with rest pain and necrosis in the case of failed revascularization usually result in major amputation in a short period of time (4). Untreated progress of ischemic necrosis regularly leads to acute renal failure and possible death. Natural cases of whole extremity mumification are frequently described in children as a consequence of manipulation of the arterial or venous system or dehydration [1–3, 5, 6]. In the presented case the patient developed a demarcation line at the level of the knee with no impairment of renal and cardiac function. The well educated patient developed a so called psychological repulsion reaction due to deterioring perception of her disease. For several months she had not been treated and the sight of her extremity and its odor had been accepted by coworkers and family members. Mumification was also promoted with the use of aloe vera ointments well known...
as mummificating agents. From the human point of view such a situation can be understood in developing countries, where access to the medical professionals is restricted or limited. In well developed countries like members of the EU with free access for all emergency cases such as limb ischaemia to vascular surgery departments, the present case is a warning of overestimation of the patient’s consent to disease. Based on the analysis of DSA it can be assumed that the affected leg could have been salvaged at the outset of CLI. However the case also proves that untreated progressive necrosis is not always equal to patient’s death. After one year of observation, reduction of cigarette smoking and classical medical treatment (ASA and simvastatin) the patient has gained good motor rehabilitation with a claudication distance of 300–500 meters.

Conflicts of interest

There are no conflicts of interest existing.

References


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