

Case Report

Homeopathic Treatment Prevents Surgery in a Case of Pronounced Acute Compartment Syndrome

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Abstract

Acute compartment syndrome (ACS) is a severe disease requiring immediate medical intervention consisting of decompressive surgical fasciotomy and antimicrobial treatment, occasionally leading to amputation of the affected limb. In this case, a patient with ACS is described. The patient received conventional treatment for pronounced acute compartment syndrome consisting of relevant medicines and seven surgical procedures, after which amputation of the right foot was suggested. At this stage the patient chose to consult a homeopathic physician. Through individualized homeopathic therapy, the abscess was cured within seven months and the patient was able to walk independently without pain. Whilst the patient was deprived of conventional therapy, namely amputation, homeopathic treatment enabled the patient to retain her limb and regain her mobility.

Keywords: Acute compartment syndrome; Homeopathic; Limb; Pain

1. Introduction

Acute compartment syndrome (ACS) [1-3] is a severe disease requiring immediate medical intervention. It is a well-known pathophysiologic complication of trauma or tissue ischemia, which affects the appearance, function, and even the viability of the involved limb. ACS is difficult to diagnose. Currently, diagnosis is based on clinical findings and intramuscular pressure (IMP) measurement. The clinical signs and symptoms may easily be attributed to other aspects of injury, which complicates the diagnosis [2]. The only effective treatment is decompressive surgical fasciotomy [1].

Delayed fasciotomy is the most important factor contributing to poor outcomes, and as a result, treatment is biased towards performing early fasciotomy [1]. Diagnosis aims to identify safe thresholds for when fasciotomy can be avoided. Since clinical findings are variable and difficult to quantify, measurement of IMP - ideally continuously - is the cornerstone of surgical decision - making. Numerous investigators are searching for less invasive and more direct measurements of tissue ischemia, including measurement of oxygenation, biomarkers, and even neurologic monitoring [1].

Pediatric acute compartment syndrome (PACS) is a clinical entity that must be carefully differentiated from the adult version. Clinicians need to consider the variable etiologies of PACS, of which trauma is the most common but can also include vascular insult, infection, surgical positioning, neonatal phenomena, overexertion, and snake and insect bites [3]. In addition to the unique etiologies of PACS, clinicians must also recognize the different signs and symptoms of PACS such as anxiety and agitation. Analgesic requirement of PACS has supplanted classic adult signs as being more accurate and allowing earlier detection. In children with questionable clinical signs, but where there is a concern regarding PACS, compartment pressure measurement may be necessary to confirm the diagnosis. Overall, outcomes after fasciotomy in children tend to be excellent; however, diagnostic delays secondary to unfamiliar clinical scenarios can lead to myonecrosis and subsequent poor outcomes [3].

Homeopathy is a medical method, which is based on the “Law of Similars”, whereby a patient exhibiting several symptoms may be cured by a homeopathic medicine producing similar symptoms in a healthy person [4]. While homeopathy is widely accepted by the population, according to public polls [5] there is an ongoing discussion as to whether homeopathy is an acceptable medical method. One of the counter-arguments is that homeopathic treatment deprives patients of the benefits of conventional medicine. The argument is rarely made that homeopathic treatment should be tried to prevent drastic sequelae of conventional treatment or illness. Nevertheless, patients do request adjunctive homeopathic treatment whilst attending intensive care units or in emergencies in pursuit of improved outcomes [6].

In the following case, a patient receiving conventional treatment for ACS is described, where life altering conventional treatment was rendered unnecessary following provision of homeopathic therapy.

2. Case Report

On June 22, 2010, the then 20 y old patient presented to the homeopathic physician for the first time. A full case history was taken and the patient’s medical records consulted. In the family history, of note was her great grandfather’s large intestine carcinoma with liver metastases. The patient herself reported varicella and rubella as childhood illnesses, and a history of hepatitis C and drug abuse. The patient reported that the onset of her acute illness was in January 2010. During cold weather a minimal swelling above the right ankle was noticed, and the patient attended the dermatological department of a university hospital. The area of the ankle was red, hot, every movement was painful, and the patient could not put weight on the foot. Cool applications were soothing. During anamnesis no cause due to an accident was ascertainable. She received a diagnosis of fistulating erysipelas.

The patient's clinical records described administration of antibiotic and local therapy. Results for IMP could not be found. Despite adequate antibiotic and local therapy, the patient's situation deteriorated dramatically. Not only did pain increase, but so did local swelling and redness in the ankle area. The patient could only move with crutches, as each step was extremely painful. The patient was therefore hospitalized. An MRI on February 13, 2010 showed signal alteration to the muscles of the right distal lower leg, peri-osseous fluid around the cortical bone of the distal tibia and pronounced signs of osteomyelitis of the distal tibia. Significant signs of infection with the incipient compartment syndrome were found in the surrounding soft tissue and musculature according to the medical report. Clinically, the patient experienced paresthesia, a faint pulse, and paralysis of the right ankle joint. The patient was referred to the surgical department and the diagnosis of a compartment syndrome was made by a surgeon as described in the medical report. During surgery, half a litre of yellow pus was released. Bacterial cultures were negative, and no other pathogens were detected. Therefore, antimicrobial susceptibility testing could be omitted. Despite surgical and antimicrobial therapy, there was no improvement, on the contrary, the abscess expanded. The patient was therefore operated on several more times: pus was released four times, the calf muscle was almost completely resected, and a latissimus dorsi muscle transplantation was performed. After this the patient could no longer walk and was confined to a wheelchair. A total of seven surgeries were performed, bacterial cultures were still negative.

The MRI of June 20, 2010 showed a picture of a severe osteomyelitis in the right distal tibia, concerning the metaphyseal / epiphyseal section, with a 1.6 cm Brodie abscess in the distal diaphysis at the transition to the metaphysis with intrusion of the right upper ankle. There was synovitis in the area of the lower ankle as well as marked soft tissue swelling. In addition, the cranial portion of the talus was affected.

The laboratory findings regarding C-reactive protein (CRP) and the leukocytes were unremarkable. Since the local situation remained unchanged despite surgery, adequate antimicrobial and analgesic therapy, the surgeons recommended amputation of the right foot, despite no evidence of a causative pathogen. The patient's mother suggested that homeopathic treatment was tried before the amputation was performed.

On June 22, 2010, the first homeopathic anamnesis took place. The striking symptoms were marked redness, heat and swelling around the right ankle joint for which the patient put on ice-packs. The patient also reported that even the slightest movement was extremely painful. Repertorization with the help of MacRepertory [7] of these symptoms led to the decision to prescribe the homeopathic medicine Bryonia alba. Bryonia is particularly indicated where pain is aggravated by any movement. Boericke describes red, swollen, hot joints, with stitches and tearing; worse on least movement [8].

The patient received a single dose of 5 globules of Bryonia alba CH200 on June 22, 2010. The homeopathic medicine was obtained from Remedia Pharmacy, Eisenstadt, Austria. Follow-up July 4, 2010: Following Bryonia alba CH200, the patient reported that she experienced severe pain which was similar to the pain she experienced at

the beginning of her disease. She described it as a stitching, drawing and burning pain. The patient suffered from this pain for two weeks despite intense conventional analgesic therapy. Then, all in a sudden, the pain disappeared. It was observed that the ankle was now minimally mobile. The patient stated that she was sweating, without relief, all over her body. This intense sweat suggested a new symptom. The homeopathic medicine *Mercurius solubilis* is very often indicated in cases of osteomyelitis, particularly when accompanied by massive sweat without relief [8]. Following repertorization, she therefore received *Mercurius solubilis* LM12 (Homeopathic medicine sourced from German Homeopathy Union, DHU, Karlsruhe, Germany), 1 x 5 globules daily in the evening over 4 weeks.

The patient spent the next three months in a rehabilitation clinic for drug withdrawal. During the follow-up on September 22, 2010, the patient reported that following the *Mercurius solubilis* prescription, severe pain had again occurred for a short time comparable with the pain she experienced at the beginning of the illness. The patient had been receiving anticoagulation (enoxaparin, Lovenox®, Sanofi Aventis, Vienna, Austria) for 4 weeks as well as antimicrobial therapy with clindamycin (Dalacin C®, Pfizer, Vienna, Austria), without any positive blood culture. Although the abscess had decreased significantly, yet it persisted, therefore the homeopathic medicine *Ledum palustre* was considered, since this medicine is thought to be helpful in suppurations, especially after insect bites [8]. An insect bite could be suspected in view of the initial erysipelas.

Therefore, on July 18, 2010 the patient received *Ledum palustre* CH12 (DHU), 1x5 globules per day. After two weeks, the pain when walking around was significantly reduced. A week later, she was able to walk again with two crutches.

In a further follow-up on December 29, 2010, the patient arrived at the office with only one crutch. An MRI performed in the meantime had shown that the inflammation was isolated and there was no immediate indication for surgery. To support hepatitis C therapy, the patient received the homeopathic medicine *Phosphorus* LM6 (Remedia), 1 x 5 globules / day for four weeks, followed by the homeopathic medicine *Lachesis* LM6 (Remedia) in the same dosage *Lachesis* is considered an effective substance in inflammatory changes and it is often used after insect stings [8] which might be suggested in consideration of the initial erysipelas.

After another four weeks, the mother informed the homeopath that her daughter was surprisingly able to walk normally since and had not used crutches. An amputation of the foot could be abstained from. At the next visit on June 16, 2011, the patient appeared without crutches, she could now easily walk for a quarter of an hour. Her remaining symptoms were deterioration in heat and on stepping. She was therefore given the homeopathic medicine *Pulsatilla* LM6 (DHU), 1 x 5 globules / day for four weeks, followed by *Ledum* LM6 (DHU) in the same dosage.

On July 7, 2018, after seven years without complaints, the patient reappeared at the homeopathy office. During the intervening time she had completed her studies. She could walk easily with limited mobility in the upper ankle and had no pain. Although the upper ankle had stiffened by itself, the orthopedic control had shown that no signs of inflammation or bone marrow edema were detectable. The reason why the patient came for a homeopathic treatment

this time was an inflammation in the area of the right lower jaw, with swelling under the right eye and the face. But also her fingers and feet were swollen, as well as the cheek in the area of the right lower jaw, where an implant had been inserted. The implant had become necessary because the patient had been assaulted in front of her front door in March 2016 and a tooth knocked out. Because of the swelling, the patient received the homeopathic medicine *Apis mellifica* LM6 (DHU), 1x5 globules daily for two weeks.

In a follow-up interview on August 1, 2019, the patient reported that the situation regarding her ankle remained unchanged, but there was a significant reduction of swelling in the whole body 2 weeks after starting the homeopathic medication *Apis mellifica*.

3. Discussion

This case contributes to the minimal literature describing therapeutic alternatives to surgery in cases of ACS. In one other case, Collins and Gilden describe a non-operative approach to the management of chronic exertional compartment syndrome in a triathlete by help of physical therapy using a functional manual therapy approach aimed at addressing myofascial restrictions, neuromuscular function and motor control deficits throughout the lower quadrant for 23 visits over 3.5 months [9]. In this case the patient returned to competitive sports without pain.

In our case report, indicated amputation was avoided following homeopathic treatment. The patient was suffering severe pain due to compartment syndrome in the right ankle joint. This severe pain in the right ankle reoccurred briefly following the administration of *Bryonia alba* and *Mercurius solubilis*, which can be interpreted as a typical first reaction to the administration of the two homeopathic medicines, also named “Hering’s law of cure” [10]. According to one of “Hering’s laws”, a person’s symptoms may appear and disappear in the reverse order of their historical appearance upon the body. Thus, a patient might be expected to re-experience symptoms (termed homeopathic aggravations) [11], during the healing process. After that both homeopathic medicines led to the continuous improvement of the complaints.

Whilst it must be admitted that the patient was deprived of the benefits of conventional therapy, namely amputation, it must also be admitted that the intervention of homeopathic therapy at this critical juncture resulted in improved quality of life for the patient through retention of her limb; improved symptoms through reduction in pain and swelling; and reduced costs due to cancellation of the intended amputation. The patient remains free of symptoms. Given the positive results of this single case, further, systematic research is required to explore whether referral for homeopathic therapy could be adjunctively considered in cases of ACS.

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