Lymphedema resulting from filariasis successfully treated by surgery

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Abstract

Филареоз — это инфекционное заболевание, передающееся личинками векторов. Процесс передачи начинается при укусе москитов, которые приносят в себе филареи. Филареозы в свою очередь могут вызывать различные заболевания, такие как лимфедема. В своём исследовании авторы описывают случай успешного лечения филареоза у 28-летнего мужчины.

Case Report

28-летний мужчина обратился с жалобой на отёк правой ноги, который ухудшился за последние 4 года. Врачебное обследование выявило наличие филареоза, и был назначен курс терапии против филареоза и хирургическое вмешательство. После операции отёк значительно уменьшился, и пациент остался без онемения.

Discussion

В своей работе авторы подчеркивают важность диагностики и терапии филареоза, так как это может значительно улучшить качество жизни пациентов.
and pain in the folds of the thigh spreading to the legs. Filariasis infection generally started in childhood age and it may take years before the symptoms finally developed. Acute symptoms may include recurrent fever for 3-5 days, swollen lymph nodes despite the absence of injury, retrograde lymphangitis, abscess, and early lymphedema of the limbs, arms, breast, and testicles that were erythematous and warm.4-6

Physical examination revealed edema, fibrosis and hyperpigmented plaque in the right inferior extremity. Chronic filariasis with sequelae of lymphatic obstruction (lymphedema, elephantiasis, hydrocele, and chyluria), may become clear 10-15 years after infection. The skin overlying the area can be hypertrophic, verrucous, and fibrotic with excessive skin folds. Cracks, ulcerations, secondary bacterial infections, and gangrene may occur. The lower extremities, scrotum, and penis are most commonly affected, with the upper extremities, breasts, and vulva being less commonly affected.

Based on the history, physical examination and supporting examination, a diagnosis of filariasis was established. In the literature, the diagnosis of filariasis is based on history relating to mosquitoes in endemic areas, clinical examination, and blood tests at night. Peripheral blood filarial antigen examination, with or without microfilariae, is considered as a patent diagnosis of filarial infections and is used to monitor the effectiveness of treatment.4 In addition, the number of microfilariae can also be calculated under the microscope using the Sedgwick Reffer Counting Cell. A lymphographic examination with a picture of obstruction, atresia or dilation accompanied by a tortuous canal and a back-flow to the skin can help diagnose this disease.5-8

The use of antifilarial drugs in the treatment of acute lymphadenitis and lymphangitis is controversial. Diethylcarbamazine can be useful for the treatment of acute lymphangitis and can be given to people with asymptomatic filariasis to reduce the number of parasites in the blood. The dose of diethylcarbamazine is gradually increased. For adults, the dose is 50 mg single dose orally on day 1, 50 mg 3x/day orally on day 2, 100 mg 3x/day orally on day 3, 6 mg /KgBB 3x/day orally on days 4-14.4,6,8 Side effects such as fever, headache, myalgia, vomiting, weakness and asthma, are usually caused by the destruction of microfilariae and sometimes by adult worms, especially in severe infections. Diethylcarbamazine is not recommended for pregnant women. Other drugs that are also active against microfilaria are ivermectin and albendazole. A combination of a single dose of ivermectin with DEC results in a more rapid
microfilariae clearance. Treatment of elephantiasis of the upper and lower extremities consists of prevention of infection, conservative action and surgery. Conservative therapy can be attempted especially when fibrosis has not occurred. In this approach, pressure is put on the affected site to reduce the edema, which, when resolved, is maintained by elastic bandages. These pads are applied from the digits to the proximal end of the extremities. Surgical approach aims to excise the excess tissue or anastomosis of lymph channels to other lymph channels or to the venous canal. Initial surgical procedures are used to reduce fibrosis, reduce the size of the lesion and reduce the size of the foot. The goal is to form legs so that later the application of compression can be used adequately so that it does not require more aggressive surgical procedures. Microsurgery procedure involves making lymphaticolymphatic or lymphaticovenous anastomosis, which can theoretically increase lymph flow drainage. The most important aspect of the surgical approach is maintaining the integrity of the skin to allow further actions, including compression, to be performed. Intensive treatment of lymphedema which is immediately followed by surgery is the most effective and fastest method of reducing the size of lymphedema in the limbs.

The prognosis of this disease depends on the number of adult worms and microfilariae in the patient’s body, the potential for worms to multiply, the opportunity for re-infection and RES activity. In early and moderate cases, the prognosis is good especially if the patient moves from an endemic area. Supervision of endemic areas can be done by giving drugs, as well as vector eradication. In advanced cases especially with leg edema, the prognosis is worse.

Conclusions

This case highlights that untreated filariasis might lead to permanent destruction of lymph nodes which manifests as lymphedema. Surgical approach is thus needed to resect the fibrotic tissue and edema.

References