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LETTER TO THE EDITOR

Weight and muscle strength loss after bariatric surgery

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Dear Editor,

A 22-year-old female patient had applied to the physical medicine and rehabilitation outpatient clinic for foot drop. It was learned that she had had bariatric surgery for obesity treatment three months ago and vitamin and mineral supplements were administered in the postoperative period. The patient started to feel weakness in her left big toe two months after the surgery, but she ignored it. Then, she noticed that her left foot was falling off three weeks later without any trauma. She had no systemic disease. She had lost nearly twenty kilograms within three months after surgery. In the physical examination, it was observed that she could not dorsiflex her left big toe and left foot, but deep tendon reflexes were maintained. Laboratory data at this time were as follows: serum albumin 46.2 g/L, folic acid 6.5 ng/mL (2-20), vitamin B12 261 ng/L (197-771), vitamin 25-hydroxi-D 33 ng/ml (30-100). The electroneuromyogram evidenced focal left peroneal mononeuropathy at the level of the fibular head. There was no compressive lumbar disc hernia and no lesion around the fibula head on the MRI images. Parenteral glucocorticoid therapy and oral vitamin B complex therapy were ordered for the patient and she was involved in a rehabilitation program including therapeutic electrical stimulation and exercise therapy. In the second week of treatment, dorsiflexor muscle strength increased from 1/5 to 3/5.

Rapid weight loss due to bariatric surgery, which has become widespread in recent years for the treatment of obesity, has also brought medical complications [1]. Among these complications, neurological complications have an important place and both the central and peripheric nervous systems can be affected [2]. Foot drop is also considered an important peripheral complication that may develop due to peroneal nerve palsy after this surgery and a rapid decrease in body weight is associated with

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a higher risk of foot drop. Although the exact cause of nerve palsy caused by weight loss is unclear, it is accepted that conditions such as low albumin levels or osmotic stress may cause intraneural edema and nerve damage due to intraneural edema is also often observed in anatomical tunnel areas [3]. Another possible cause of peroneal nerve mononeuropathy is that the peroneal nerve becomes more sensitive to external pressure as a result of the decrease in the fatty tissue around the fibular head [4].

In conclusion, as bariatric surgery becomes more common, complications are frequently encountered. Complications that may develop in patients due to insufficient nutritional intake after this surgery can be eliminated with supplements. However, different complications such as peripheral neuropathy may be encountered and it is important to follow the patients in this regard.

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