

## Mesotherapy for Benign Symmetric Lipomatosis

Toshio Hasegawa · Tomoyuki Matsukura ·  
Shigaku Ikeda

Received: 19 November 2008 / Accepted: 21 April 2009 / Published online: 2 June 2009  
© Springer Science+Business Media, LLC and International Society of Aesthetic Plastic Surgery 2009

### Abstract

**Background** Benign symmetric lipomatosis, also known as Madelung disease, is a rare disorder characterized by fat distribution around the shoulders, arms, and neck in the context of chronic alcoholism. Complete excision of nonencapsulated lipomas is difficult. However, reports describing conservative therapeutic measures for lipomatosis are rare.

**Methods** The authors present the case of a 42-year-old man with a diagnosis of benign symmetric lipomatosis who had multiple, large, symmetrical masses in his neck. Multiple phosphatidylcholine injections in the neck were administered 4 weeks apart, a total of seven times to achieve lipolysis.

**Results** The patient's lipomatosis improved in response to the injections, and he achieved good cosmetic results.

**Conclusions** Intralesional injection, termed mesotherapy, using phosphatidylcholine is a potentially effective therapy for benign symmetric lipomatosis that should be reconsidered as a therapeutic option for this disease.

**Keywords** Benign symmetric lipomatosis · Madelung disease · Mesotherapy · Phosphatidylcholine

### Abbreviation

MRI Magnetic resonance imaging

Benign symmetric lipomatosis, also known as Madelung disease, is characterized by diffuse deposits of fat arranged symmetrically around the neck, shoulders, and upper extremities [1, 2]. It is more frequent among middle-aged men whose history includes decades of heavy alcohol consumption.

Benign symmetric lipomatosis is assumed to be a discrete malfunction in the fat metabolism resulting from damage to mitochondrial DNA [3–5]. Over the years, the masses are nonencapsulated and can eventually reach a very large size, diminishing the ranges of neck and upper extremity motion.

Treatment of lipomatosis is difficult. Surgical removal via lipectomy or liposuction can yield good cosmetic results, but complete excision of nonencapsulated lipoma is difficult. On the other hand, reports of conservative therapeutic measures for lipomatosis are rare [6]. We report successful noninvasive treatment of benign symmetric lipomatosis with intralesional injection of phosphatidylcholine.

### Case Report

A 42-year-old man presented with multiple, large symmetric masses around his neck, shoulders, and upper arms that had enlarged progressively during the previous 4 years (Fig. 1). The patient complained of discomfort and a deteriorating range of neck motion. Moreover, he reported difficulty finding clothes that fit his neck and shoulders.

Magnetic resonance imaging (MRI) confirmed the presence of large masses of subcutaneous fat tissue infiltrating the surrounding tissue (Fig. 4a). Biopsy showed lipomas histologically (Fig. 2). Routine laboratory blood tests including electrolytes, glucose, and a complete blood

T. Hasegawa (✉) · S. Ikeda  
Department of Dermatology, Juntendo University School  
of Medicine, 2-1-1 Hongo, Bunkyo-ku, Tokyo 113-8421, Japan  
e-mail: t-hase@med.juntendo.ac.jp; t-hase@juntendo.ac.jp

T. Matsukura  
Division of Plastic Surgery, Matsukura Clinic, 4-11-6 Jingumae,  
Shibuya-ku, Tokyo 150-0001, Japan