



Fat deposit, cellulite tx options: research reveals some side effects, good results with phosphatidylcholine.(Cosmetic Dermatology)

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Dermatology Times Miami Beach, Fla. -- New information regarding the treatment of fat and cellulite gives dermatologists something to consider as an option to traditional treatments. According to Doris M. Hexsel, M.D., the new research and clinical experience she presented at the H&H Dermatology Seminar are crucial to decisions about incorporating any new treatment method.

Fat deposits

"Localized fat deposits are a cause of discomfort and anguish, leading patients to undergo surgical procedures such as liposuction and dermolipectomy," says Dr. Hexsel, a dermatologist and former professor of dermatology at the University of Passo Fundo in Brazil. She is also coordinator of the Brazilian Society of Dermatology and a member of the American Academy of Dermatology.

A new injectable for localized fat--phosphatidylcholine (Lipostabil or Essentiale, Natterman International GMBH) is emerging in some countries and has been used off-label cosmetically in Brazil since the late 1990s. This phospholipid is extracted from soybean lecithin and is abundant in cell membranes. It actively functions to structure cells and transport between cells and can alter cholesterol and other triglyceride metabolisms.

Phosphatidylcholine was initially used in emergencies to treat atheroma plaques in cardiac diseases and is approved in some European countries for cardiac use. Because it can change the composition of fat deposits, this agent has been used to treat hypercholesterolemia, fat embolism, arterial-wall fatty deposits or plaques and lipid atheromas.

Although Dr. Hexsel says no histological or pharmacodynamic studies have demonstrated phosphatidylcholine's mechanism of action, it is hypothesized that the agent penetrates the adipocyte through the double lipid layer, thus emulsifying and altering the stored lipids to make them water soluble. Being incompatible with the liposoluble material stored in the adipocyte, the fat is eliminated from the site.

Dr. Hexsel says that phosphatidylcholine has been widely used in Brazil to treat fat deposits in subcutaneous tissue, but in 2003 the country's regulatory agency took action.

"Due to concern about the uncontrolled and overuse of phosphatidylcholine injections, the Brazilian National Agency of Health Inspection (ANVISA), which regulates the use of medication in Brazil, prohibited its use at a national level," she reports.

Dr. Hexsel says this treatment is best suited for a patient with a small and localized fat area that can be treated with one or two injections. This treatment is not for patients who "want to lose weight by injecting any available new treatment and who do not worry about their health."

Concerned about the absence of medical research proving the safety of phosphatidylcholine, in 2003 she and colleagues reported on their research into the safety and efficacy of the agent to treat fat deposits.

They treated 18 patients with 250 mg/ml phosphatidylcholine injections in various subcutaneous fat

deposits and performed 15 lab exams before treatment and at days two or three and 15. Maximum dosage was 10 ml per session. Each patient had five treatments, with at least 10 days between applications.

"These measures were taken to avoid adverse systemic effects that may result from excessive doses or short intervals between injections," Dr. Hexsel notes. "Phosphatidylcholine altered slightly the hepatic enzymes, but they returned to normal levels by the 15th day, so this is the therapeutic protocol we established with our patients."

Other adverse effects can include moderate to severe edema, erythema, localized heat, slight to moderate discomfort, bruises, and slight to moderate itching.

They concluded that "the off-label use of phosphatidylcholine in the treatment of fatty pads and small areas of localized fat is safe, low-cost and effective."

Dr. Hexsel says, "Liposuction is still best to remove medium to large amounts of fat. Dermolipectomy is safe and effective to remove fat and excessive skin."

Cellulite

Dr. Hexsel also reported on the minimally invasive treatment for cellulite called Subcision in which needle injections release tensions of the subcutaneous fibrous septa that cause cellulite dimpling. In 10 years, she has treated more than 1,500 patients with this technique. Someone with a high degree of cellulite without loose skin or large fat deposit areas is a good candidate for Subcision.

"The term originated from the words 'subcutaneous' and 'incisionless' and describes surgery in the subcutaneous structures that does not require any incisions," she explains.

Dr. Hexsel says that in 1997 she and Rosemary Mazzuco, M.D., developed this cellulite treatment based on the original Subcision technique introduced in 1995 by David Orentreich, M.D., and Normal Orentreich, M.D., to correct wrinkles, scars and other skin surface depressions.

For cellulite, the Subcision mechanism of action is a "redistribution of the tension and traction forces exerted by the fat and subcutaneous septa on the depressed areas of the thighs, buttocks and other parts of the body."

Among the 10 Subcision studies Dr. Hexsel has conducted, one demonstrated the technique's effectiveness in 232 women aged 18 to 52 years who had cellulite on the thighs and buttocks. Although all patients experienced post-operative pain, bruises and hemosiderosis, patients were highly satisfied and had improved surface depressions.

"The treatment of cellulite is complex, as its success depends on measures such as physical exercises, weight control, diet and others," she points out.

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