EVALUATION OF INJECTION LIPOLYSIS FOR REDUCTION OF LOCALIZED ADIPOSITIES

Thesis

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بسم الله الرحمن الرحيم

﴿قَالُوا سُبْحَانَكَ لاَ عِلْمَ لَنَا إِلاَّ مَا

عَلَّمْتَنَا إِنَّكَ أَنْتَ العَلِيمُ الحَكِيمُ﴾

صدق الله العظيم

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First and foremost thanks to GOD, the most beneficial and merciful.

I would like to express from my heart to their heart my sincere thanks to my Parents.

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And at the end I hope that this work will add a new to Scientific Researches and helps in making good results in plastic surgery.

To

My

Parents

Abstract

Introduction: Lipodissolve is a combination of pharmaceutical agents in an injectable form administered using a technique developed in Austria in 2002 for the purpose of subcutaneous fat reduction, many authors consider that lipodissolve injections reduce the size of localized fat deposits & cause skin retraction in body regions containing small deposits of localized fat, cellulite or post lipoplasty deformities, Most of the authors use phosphatidylcholine as the basic source of lipodissolve injections.

Aim of work: Evaluation of the results of injection lipolysis using Phosphatidylcholine and Deoxycholate with combination of L-Carintine or Organic Silicium for reduction of localized adiposities in 36 adult patients.

Results: the procedure was effective in dissolving fat with marked improvement in 24 cases and with standardization of the dosage and technique.

Key words:

Injection lipolysis, Phosphatidylcholine, Lipodissolve.

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INTRODUCTION

Injection lipolysis has been shown to offer a non surgical alternative to lipoplasty in patients with localized lipodystrophies **(Ablon and Rotunda, 2004)**, The use of injection to reduce localized fat deposits, first discovered in Italy in 1980s **(Maggiori, 1988)** & was popularized in South America over the last few years. **(Montgomery, 1996)**

Lipodissolve is a combination of pharmaceutical agents in an injectable form administered using a technique developed in Austria in 2002 for the purpose of subcutaneous fat reduction. **(Rohrich, 2005)**

Many authors consider that lipodissolve injections reduce the size of localized fat deposits & cause skin retraction in body regions containing small deposits of localized fat, cellulite or post lipoplasty deformities, although significant reduction of fat deposits was claimed in most patients undergoing this procedure, still some patients and also some practitioners surgeons have variable response, The exact histopathological changes, the long term results & the side effects of the procedure are still lacking. **(Sahelian, 2005)**

Most of the authors use phosphatidylcholine as the basic source of lipodissolve injections **(Hasengschwandtner, 2005).** Some authors recommend adding other different materials like; Deoxy-cholate as sodium deoxycholate **(Rotunda, 2004),** Amphotericin B also is some times combined with deoxycholate to enhance their solubility & this method was used by Rotunda in 2004,Others use a mixture of; NaCl as

dilutant, Buflomodil as vasodilator,Vitamin B-complex, and this first developed by Franz Hasengschwandtner in 2003. **(Hasengschwandtner, 2004)**

Although Lipodissolve injections are a safe & effective method of achieving a measurable decrease in the thickness of localized fat deposits as described by many authors, still the proper formula, injected in the correct location using the proper technique & dosage are critical points that need to be reviewed & evaluated.

AIM OF WORK

Evaluation of the results of injection lipolysis using Phosphatidylcholine and Deoxycholate with combination of L-Carintine or Organic Silicium for reduction of localized adiposities in 36 adult patients.

HISTORY

The traditional French method of mesotherapy was originally practiced as microinjections of pharmaceuticals delivered intra-dermally using a technique known as nappage until recently the primary focus of mesotherapy was the treatment of more than 200 diseases **(Bryant, 2004)**.The use of injection to reduce localized fat deposits first discovered in Italy in 1980s **(Maggiori, 1988)** and was popularized in South America over the last few years. **(Montogomery et al, 1996)**

Phosphatidylcholine (PPC) is used as the basic source of lipodissolve injections **(sahelian, 2005)**; it was first isolated and used intravenously in Odessa, Russia in 1959 for the treatment of fat embolism. **(Brook, 1986)**

In 1988, Sergio maggiori reported the use of phosphatidylcholine injections for cosmetic purposes, he used this substance for treating xanthelasmas which soon expanded in Europe and then in South America **(Maggiori, 1988)**. In 1989, Bobkova et al published a treatise on the metabolic effect of lipostabil forte (Aventis, Bridgewater,NJ) on serum lipid concentrations, his study demonstrated a significant decrease in the serum triglyceride levels, reversal of insulin resistance and improvement of thyroid function. **(Bobkova et al, 1989)**

Many others have substantiated these findings including a decrease in LDL and VLDL an increase in HDL as well as improvement in liver fibrosis in patients with cirrhosis and hepatitis, so lipostabil markets in Europe primarily for the treatment of coronary atherosclerosis.

(Lijnen et al, 1996), (Kidd, 1996)

In 1995, Rittes reported success in using (PPC) injections to reduce lower lid fat pad prominence **(Rittes, 2001)**, in 2001 she suggested that in some patients this procedure could replace lower lid blephroplasty, by 2003 widespread reports of lipostabil use by lay individuals combined with lack of clinical or safety studies, prompted to recommend banning the use of lipostabil in Brazil as a fat reducing injection. **(Brazil issues, 2005)**, at this time Rittes had reported using lipostabil for body contouring in 50 patients.

In 2003 Hasengschwandtner performed a larger study of 187 patients in Austria, using a modified formula **(Hasengschwandtner, 2004)**, Rotunda confirmed the beneficial effects of the infra-orbital (PPC) formulation injection introduced by Rittes with similarly designed but smaller open label study on 10 patients. **(Ablon and Rotunda, 2004)**

In late 2003, a study was presented at the American society for dermatologic surgery meeting describing the detergent effect of sodium deoxycholate on fat dissolution in porcine in vitro study; this widely quoted treatise describes the nonspecific effect of deoxycholate on both adipose tissue and muscle cells. **(Rotunda et al, 2004)**