
POLICY STATEMENT MESOTHERAPY

Background

Mesotherapy was developed in France in 1952 by Dr. Michel Pistor.¹ This therapy involves a series of injections containing minute quantities of vasodilators, non-steroidal, anti-inflammatory medications, enzymes, nutrients, antibiotics, hormones, and calcitonin into the layer of fat under the skin. Mesotherapy was originally developed to treat vascular and lymphatic disorders, however depending upon the substance injected; it is also used to treat chronic pain, alopecia, bone and joint disorders, and psoriasis.² A common use for mesotherapy is body contouring, accomplished by treating cellulite, reducing body fat and spot weight loss. When it is used for this purpose, mesotherapy has also been called dermatoliposclerosis and it is often promoted as a non-surgical alternative to superficial liposuction.

Mesotherapy has been widely used in Europe and South America and in 1987 it was recognized by France as a separate medical specialty. In the United States however, mesotherapy is a relatively new treatment option.

Technique

A specially designed applicator system with a very fine needle is used to inject the desired drug or injectable underneath the dermal layer of the skin into the subcutaneous adipose fat in the area selected for body contouring. The number of injections will vary depending on the size of the area treated. Two of the more common injectables utilized to treat cellulite and reduce body fat include lecithin (phosphatidylcholine) and isoproterenol, a lipolytic agent that stimulates beta adrenergic receptors.^{3,4} Lecithin is actually a compound present in human bile and is known to be needed for the digestion of dietary fats.⁵

Mechanism of Action

The theory behind mesotherapy remains elusive and no studies have been published in the English language to identify the true mechanism of action. Some claim a mechanism of action through increased blood flow in the capillary networks as well as increased lymphatic flow throughout the mesoderm.⁶ Others indicate that the medications cause shrinkage of fat cells by dissolving fat which is then excreted through the urine and bowels.

Cost

A series of eight to fifteen treatments at two week intervals are recommended with the average cost of treatment ranging from \$500 to \$1,500.

Adverse Reactions/Risks

Immediate or delayed allergic reactions to the injected drugs/solutions, skin infections requiring antibiotics and urticaria-pigmentosa at the injection site are some of the reported side-effects of mesotherapy.⁷ It is also known that lecithin can cause inflammation and swelling at the injection site. The most common injectables for these treatments are available from the Internet, usually from overseas sites, therefore the purity of these agents is unknown. The safety and efficacy of injections of a beta-adrenergic agonist such as isoproterenol is also unknown.

It is important to note that the FDA has not approved any medications for use in mesotherapy or body contouring.

Ethical Considerations

The theory behind mesotherapy is virtually untested in randomized double blind studies. Therefore, any practitioner choosing to pursue these treatments may not be able to verify the mechanism of action, success rates or safety of the treatments before undertaking them.

Recommendations

The American Society of Plastic Surgeons® does not endorse the use of injectable treatment for any condition at this time. Further research into the safety and efficacy is needed. The seemingly painless approach to body contouring will always be appealing to many, but without scientific evidence to verify mesotherapy's usefulness, practitioners and patients must be aware of the risks of the treatments and the lack of FDA approval of medications used in the injections.⁸

References

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