

French Mesotherapy for the Treatment of Pain

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The clinical applications of mesotherapy outside the realm of nonsurgical cosmetic medicine are almost entirely unheard of in the United States. However, in France, the birthplace of mesotherapy, it is first and foremost a pain and sports medicine modality. Mesotherapy is of particular interest to clinicians due to its safety, tolerability, cost effectiveness and seeming efficacy when compared to conventional treatment protocols. This discussion is intended to provide an overview of mesotherapy as it is practiced in France for the treatment of chronic pain and acute injury.

History of Mesotherapy

In 1952, Dr. Michel Pistor, a generalist practicing in rural France, administered 10 mL of procaine intravenously in an attempt to abort an acute asthma attack in a patient. While the treatment did not ameliorate the patient's respiratory status, upon follow-up, the patient reported a significant improvement in his impaired hearing. Soon thereafter, Dr. Pistor began experimenting with superficial injections of procaine around the ears of hearing-impaired patients and experienced some success. Soon his practice was full of hearing-impaired patients seeking treatment. His results were mixed. However, many of these patients saw improvement in seemingly unrelated conditions such as eczema of the auditory canal and temporomandibular joint (TMJ) pain. In addition, patients reported improvement in tinnitus, which can be related to hearing impairment.¹

Dr. Pistor continued experimenting with superficial injections of procaine for the treatment of a variety of disorders. On June 4, 1958, he published an article describing his clinical success with this novel procedure in which he stated, "the action on the tissues originating from the mesoderm is so extensive that these treatments should be called mesotherapy" (author's translation). This was the first time the term "mesotherapy" appeared in print. Dr. Pistor described mesotherapy as "smallest dose, infrequently, in the correct location."²

The mesoderm is one of the three embryologic, histological classifications-- endoderm, mesoderm and ectoderm. The cells of the endoderm develop primarily into the internal organs while the cells of the mesoderm level develop into dermis and hypodermis, fatty tissues and the musculoskeletal system. The ectoderm becomes, among other tissues, the brain and epidermis. The term "mesotherapy" therefore refers to injections into the dermis and hypodermis, which originate

from the mesoderm. As will be discussed later, one mesotherapy technique developed after Dr. Pistor's 1958 paper involves injecting the epidermis, which originates from the ectoderm. However, it is important to note that the mesoderm exists only in embryos; there is no mesoderm layer of the human skin--a statement commonly made in error by English language mesotherapists. One is not "injecting into the mesoderm." Rather, one is injecting into those structures that have arisen from mesoderm.

The first international conference on mesotherapy took place in 1976--also the year in which mesotherapy was first used in inpatient settings in France. In 1981, Dr. Jacques Le Coz introduced mesotherapy into the orthopedic clinic at the Institut Nationale du Sports (National Institute of Sports) in Paris. In 1987, the French Academy of Medicine officially recognized mesotherapy as a legitimate treatment modality within conventional medicine.³

Currently in France, although still viewed as experimental and unproven, mesotherapy is recognized as a legitimate treatment modality by the French Academy of Medicine and is reimbursable by that country's national social security medical coverage. It has been integrated into France's largest sports medicine facility⁴ and is practiced in a number of pain management centers in France⁵ as well as in North Africa⁶. Apart from the French Society of Mesotherapy, some of the more established national mesotherapy associations or societies can be found in Algeria, Argentina, Belgium, Brazil, Colombia, Great Britain, Germany, Greece, Israel, Italy, Mexico, Portugal, Russia, Switzerland, Spain, Tunisia, Turkey and Venezuela. The popularity of cosmetic mesotherapy is currently exploding in Asia, with new national associations and societies being formed every year.

Basic tenants of mesotherapy

Mesotherapy is characterized by its unique styles of injection--various superficial injections using specialized short needles and specific techniques directly over the sites of the affected structures.⁷ The proposed mechanism of action of mesotherapy is that solutions that are injected intracutaneously remain in the area longer than they would if delivered via deeper injection because they are cleared more slowly by the general circulation. In addition, it is felt that these superficially injected solutions continue to penetrate into the deeper tissues. Kaplan and Raincourt injected radioisotope-marked calci-

