Histological and ultrastructural analysis of cellulite. The role of dermal fat

In the literature there is a paucity of ultrastructural and morphological characterization of dermal adipose compartment, both in physiological conditions, and after cellulite occurring. The dermal adipose tissue is to be considerable as paracrine organ that, with the secretion of hormones, cytokines and growth factors influences the morphology of dermis and consequently, the aspect of the skin. Dermal adipose tissue is characterized by peculiar distribution of adipocytes, that is deeply modified in the cellulite lobules; adipocytes increment in number, size and are characterized by a modification of secretion pathways. As a consequence, in dermal adipose tissue affected by cellulite, adipocytes modify their biological function, reacting to different chemical, ischemic stimuli characterizing cellulite. In the development of cellulite dermal fat play the main role and the aim of this study is to describe the aspect of dermal compartment after cellulite occurring in order to identify the role of different cellular element and the biological pathways that leading to pathology progression. The study propose a multimodal approach by which dermal adipose tissue in physiological conditions and after cellulite development has been studied by morphological and ultrastructural analysis and also using high resolution magnetic resonance imaging.
Results suggesting that the previously described morphology of cellulite affected dermal adipose tissue is not related to gender but is related to hormones, to oxidative stress, to the damage of micro vascularization and to others biochemical factors that leading to the typical aspect of the skin.

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