

2ND WORLD CONGRESS OF GASTROENTEROLOGY & DIGESTIVE DISEASES



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The Link Between Metabolic Syndrome and Cellulite - Our Clinical Experience from Athens Medical Center Lifestyle Medicine Program

Objectives: To explore the potential association between Metabolic Syndrome (MetS) and cellulite, focusing on shared pathophysiological mechanisms.

Scope: MetS significantly increases the risk of cardiovascular disease and Type 2 diabetes mellitus. Subcutaneous adipose tissue (SAT) distribution, in certain locations, is also a risk factor for cardiometabolic disease. Cellulite is a common condition affecting mostly women's skin texture. Despite being considered primarily a cosmetic issue, cellulite shares multiple common features with MetS.

Methods: Shared clinical and pathogenetic features between MetS and cellulite are discussed.

Results: Common pathophysiological processes between MetS and cellulite are outlined in Table 1.

Pathophysiological process	MetS	Cellulite
Inflammation	Systemic inflammation from adipose tissue dysfunction	Local inflammation from adipose hypertrophy and fibrosis
Hormonal imbalance	Estrogen affects fat distribution	Estrogen affects fat distribution and connective tissue structure
Adipose tissue dysfunction	Visceral adiposity contributing to insulin resistance and inflammation	Subcutaneous fat hypertrophy and altered extracellular matrix, leading to typical skin changes
Microcirculatory changes	microcirculation impairment, affecting blood flow and lymphatic drainage, contributing to tissue edema and fibrosis.	

Table 1. Shared pathophysiological processes between MetS and cellulite

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We have observed tirzepatide's beneficial effects in women with polycystic ovarian syndrome and increased androgens; apart from improving insulin resistance and reducing inflammation, tirzepatide treatment also led to improved skin appearance with less cellulite, skin tags, and discolored patches, all of which are also signs of insulin resistance.

Conclusions: MetS and cellulite share several pathophysiological processes. Our hypothesis is that the association between SAT and cardiometabolic risk may also apply to SAT in areas where cellulite appears, independent of location. Further research is essential to elucidate the pathophysiology of these conditions and their common processes, identify clinically relevant biomarkers, and develop targeted therapies.

Biography: Sotiris Adamidis is the Director of Internal Medicine in Athens Medical Center, President of the European Society of Diabetes, Metabolic Syndrome and Obesity (EsoDiMeSO), and Director of the newly established Lifestyle Medicine Department in Athens Medical Center.

He received his MD from Athens University School of Medicine. He is board-certified in Internal Medicine with a special interest in metabolism, diabetes, obesity, and related conditions. He is a member of the American Diabetes Association and the Southern Medical Association. He is well published in medical journals, lay press, and serves on the editorial board of numerous journals. He is invited as a medical expert on television, often commenting on health and other matters, commenting on conditions such as hypercholesterolemia, Cardiometabolic diseases, and COVID-19-related conditions.

He has authored two books, "Metabolic Syndrome, Obesity and Diabetes" and "From Metabolic Syndrome to Cellulite: The Medical Solution", as well as 2 poetry books.