SKIN DISEASE RELATING TO METABOLIC SYNDROME IN WOMEN

Certain skin conditions are related to metabolic syndrome; therefore, patients presenting with such conditions should be followed for metabolic complications.

What is metabolic syndrome (MetS)?
MetS is a cluster of interconnected biochemical, clinical, and physiologic abnormalities that increase the patient’s risk for cardiovascular disease (i.e. heart attack and stroke), type 2 diabetes, and overall mortality. These abnormalities include obesity, high blood pressure, elevated blood sugar level, high triglyceride and low high-density lipoprotein cholesterol levels. Research has shown that sex hormones are linked to pathways of MetS. In women, higher testosterone and lower estrogen levels have been associated with an increased risk for MetS.

MetS through the female life cycle
Factors such as obesity, ethnic heritage, environment, and family history may be involved in the development of MetS early in life. Early menarche has been associated with an increased risk of MetS in adulthood. Pregnancy is characterized by physiologic metabolic alterations, and women with MetS are at increased risk for gestational diabetes and pre-eclampsia. Menopause increases the risk for MetS possibly due to estrogen deficiency during this period of life. Menopausal hormone replacement therapy has shown beneficial effects on women’s metabolic profile (e.g. improvement in blood lipid levels, decrease in diabetes risk).

Skin diseases related to MetS
MetS typically involves insulin resistance and hyperlipidemia, and these abnormalities can be associated with skin manifestations. Patients with inflammatory skin disorders such as psoriasis vulgaris and hidradenitis suppurativa are at increased risk for MetS. Cutaneous diseases that are sex hormone-mediated and/or associated with high androgen blood levels, such as polycystic ovary syndrome, acanthosis nigricans, acne vulgaris, and pattern alopecia, have been associated with insulin resistance and increased risk for MetS.

MetS-related cardiovascular disease linked to skin conditions
Risk factors for cardiovascular disease occur in most of the above skin diseases, especially in psoriasis and polycystic ovary syndrome. These skin conditions are associated with high blood pressure and increased blood lipids as well as increased risk of heart attack and atherothrombosis.

Management
Health care providers should be familiar with skin conditions associated with MetS. Components of MetS such as hyperlipidemia, elevated blood pressure and sugar levels should be promptly identified. Establishing an early MetS diagnosis is crucial to its management. A plan to prevent the cardiovascular complications of MetS should be instituted early on the course of the syndrome. Skin disease may improve when MetS is under control, and weight loss interventions in such patients can have a beneficial effect on the skin disease. A multidisciplinary approach, i.e. collaboration among specialists and primary care providers, and lifestyle interventions are required to manage the aspects of MetS linked to skin disease.

FOR MORE INFORMATION