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Review Article and Clinical Experience: Metabolic Syndrome vs Insulin Resistance Syndrome (A Cluster of Components and Strategies for Treatment)

Abstract

Metabolic Syndrome = MS (in which abdominal Obesity is the culprit of the MS) is defined by NCEP-ATP III in 2001, whereas Dysmetabolic Syndrome = DMS and Insulin Resistance Syndrome = IRS are recommended terms by AACE (in 2002) and ACE (in 2002), respectively. Both AACE and ACE stated that insulin resistance plays central role in the syndrome. All these terms of the syndrome are originally and firstly coined by Reaven as Syndrome-X in 1988, and then Metabolic Syndrome-X in 1999. Either MS or DMS or IRS has become major issues because of its impact on the risks of Type 2 DM (T2DM) development and cardiovascular diseases. The criteria of MS, IRS (including its risk factors), and the clusters of components belong to MS and IRS, are listed in this paper. Rational strategies for the treatment of MS and IRS are focused on obesity and insulin resistance, respectively, and can be summarized as follows: A. Improving insulin sensitivity and lifestyle (weight loss 5-10%, aerobic exercise ± 30-40 min, 4 times/week). B. Pharmacological interventions directed to the targets for (mmHg, ml/dl): Blood Pressure < 130/85, and 130/80 in diabetic patients, Fasting Plasma Glucose (FPG) < 110 or 2 Hour Post-75 Glucose Challenge < 140, Triglyceride (TG) < 150, and HDL-Cholesterol > 40 for men, and > 50 for women. Clinical evidence-based data supported, that Metformin (UKPDS Outcomes), Sibutramine (STORM Landmark Trial), and Orlistat (XENDOS Study), to date, are the promising drugs for the treatment of MS/IRS. However, the drugs specifically to improve the insulin sensitivity are hoped to treat this Syndrome.

Conclusions: Syndrome-X, Metabolic Syndrome-X, MS, DMS, or IRS, all have become major issues because of their roles in the development of either T2DM or Cardiovascular Diseases. The cluster of components of this Syndrome and its risk factors should be well recognized. Improving insulin sensitivity, losing body weight, aerobic exercise, and pharmacologic interventions (Metformin, Sibutramin, Orlistat) are rational strategies for the treatment of MS/IRS.

Keyword : metabolic, syndrome, dysmetabolic, syndrome, insulin, resistance, syndrome, type, 2, diabetes, mellitus, cardiovascular, diseases,

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