The natural history of metabolic syndrome has been wildly described which manifested with cardio metabolic risk such as hypertension and dyslipidemia together with diabetes mellitus or not. Unfortunately, increasing burden of childhood obesity especially enhanced body mass index specifically centrally distributed adiposity trigger prevalence of metabolic syndrome in western countries. To help clinicians to cope with metabolic syndrome associated complications based on latest guidelines still require increase in early diagnosis of the disease. Main treatment strategies cover strict body weight control, blood pressure management, blood lipids normalization with good glycemic aspects secondary to increase life style quality with right diet modification. The link between metabolic syndrome and cardiovascular risk is clear as possible however, to be overweight is accept independent risk factor but insulin resistance and dyslipidemia appear integral components of the disease. The primary end points of cardio vascular metabolic risk profile display coronary and peripheral arterial disease, myocardial infarction, congestive heart failure, arrhythmias and stroke. Reduced HbA1c, low density lipoprotein cholesterol (LDL-C), triglycerides and increased high density lipoproteins (HDL-C) are very well known benefits of decrease future cardio metabolic risk. All these algorithms modify new treatment concepts to explore best future pharmaceutical benefits of decrease future cardio metabolic risk. All these algorithms are available in metabolic syndrome if the disease together with diabetes. The glucagon like peptide (GLP-1) analogue such as exenatide included randomized controlled clinical trials demonstrate that it is effective in improving glycemic control together with beneficial weight loss. The other newer agents “dipeptidyl peptidase-4 (DPP-4) inhibitor” gliptins (such as sitagliptin and vildagliptin) included clinical trials demonstrate they are effective in management of glycemic control especially, appear to improve exercise-induced arrhythmias.

Newer therapeutic agents also are available in metabolic syndrome especially, appear to improve exercise-induced arrhythmias. A paradigm is still on regarding which therapy should initiate first and when. For that reason, key market players never give up and still willing to deal to develop new molecules. The challenging point in this arena is emerging therapeutic agents seems to be not very effective because this is complex, multifactorial and multifaceted syndrome and together with cardiovascular complications.

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