Body mass index (BMI) is an anthropometric index used to evaluate a person’s weight. In the general population, higher BMI is associated with more adverse outcomes as well as cardiovascular risk factors. The current clinical guidelines suggest weight control within desirable BMI as 18.5 to 24.9 kg/m². In the event of coronary artery disease or acute coronary syndrome, the impact of BMI on clinical outcomes still remains controversial. Some studies have demonstrated that overweight and obese patients had better prognosis than normal weight patients. Adiponectin, a secretory protein produced by adipocytes and inversely proportional to BMI, is a possible mediator for the so-called “obesity paradox”, a term for the obese-protective phenomenon. Lower plasma adiponectin is associated with the progression of coronary artery disease. However, in the presence of acute coronary syndrome, patients with higher plasma adiponectin could be associated with adverse outcomes. Further studies including serial change of plasma adiponectin, or the use of other methods to discriminate lean and fat body mass are necessary to investigate this seemingly contradictory topic.

Key Words: Adiponectin • Body mass index • Obesity paradox

INTRODUCTION

A person’s weight can be evaluated clinically by body mass index (BMI), an anthropometric index defined as weight in kilograms (kg) divided by the square of the height in meters (m²). According to global estimates from the World Health Organization (WHO), obesity is becoming a prevalent problem because the incidence rate of obesity in the general population has been progressively increasing, not only in Western countries but also in predominantly Asian areas including Taiwan and China. Besides, obesity is associated with increased morbidity and overall mortality, as well as with cardiovascular risk factors such as diabetes, hypertension and hyperlipidemia. This review will address the current understanding of the impact of BMI on patients presenting with coronary artery disease (CAD), especially those with acute coronary syndrome (ACS).

Increasing body mass index is a prevalent issue in general population

BMI is an anthropometric index which is calculated as a person’s weight in kilograms (kg) divided by the square of height in meters (m²). According to the definition of World Health Organization (WHO), adult BMI ≥ 25 is overweight, and ≥ 30 indicates obesity (Table 1). In the United States, incidence rates of overweight and