Obesity Paradox in the Elderly

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Obesity had reached epidemic around the world. In the United State, two-thirds to three-fourths of older adults (age 60 years and above) were overweight or obese (body mass index (BMI)≧25kg/m^2)). In Taiwan, the prevalence of overweight or obese (BMI ≧ 24 kg/m^2) in the elderly (age 65 years and above) in 2000-2001 was 38.5 % in men and 47.0 % in women, respectively. The Similar situations are found worldwide. Obesity had been recognized as second leading cause of preventable death in the United States, close behind tobacco use, and at least 300,000 deaths per year are due to the obesity epidemic. Obesity increases the risk of many chronic diseases, such as hypertension, type 2 diabetes, cardiovascular disease, and total mortality in younger and middle-aged adults. However, several studies found that overweight or obese subjects with certain situation such as in critically or chronically ill diseases may paradoxically have better outcomes than normo-weight subjects. This conundrum has been called the "Obesity Paradox". The obesity paradox has been described for patients with many chronic diseases as well as undergoing certain procedures, including congestive heart failure, coronary artery disease, hypertension, stroke, non-heart failure veterans, undergoing hemodialysis, and undergoing non-bariatric general surgery. The change in body composition was apparent in the elderly. For example, fat free mass may decrease up to 40 % from young adult into elderly. Body fat may increase from 14 % to 30 % in the same period. Some studies also showed that subjects with higher BMI had lower all-cause mortality than normal BMI in the elderly. The same "Obesity Paradox" may exist in the elderly.

The underlying pathophysiology of the "obesity Paradox" is still not known. There are several possibilities to explore this phenomenon. First, obese patient may be diagnosed with these chronic diseases at an earlier stage than patients in lower BMI categories. Then, they may be more aggressively treated. Second, cachexia which is a wasting syndrome observed in patients with advanced diseases may be another explanation. Patients with cachexia may experience anorexia and muscle/fat wasting which induce malnutrition and have low BMI. Third, adipose tissue may secrete protective cytokines and other hormonal products to reduce mortality. However, not many researchers have proposed enough biological evidences to explain the obesity paradox. So, can we encourage our patients to eat more? Based on the evidences available now, we can't conclude that the obesity paradox is real, certainly not enough to alter treatment for patients with chronic ill diseases. Further researches focus on this issue are necessary.