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Obesity and Kidney Disease: A Personal Perspective

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Editorial

In 2019, approximately 600 million adults aged 18 and over were obese around the world. Obesity is a significant risk factor for renal disease development. It raises the likelihood of developing significant Chronic Kidney Disease (CKD) risk factors such diabetes and hypertension, as well as having a direct impact on the progression of CKD and End-stage Renal Disease (ESRD). A (presumably) compensatory mechanism of hyperfiltration occurs in obese people to satisfy the higher metabolic demands of their greater body weight. Increased intraglomerular pressure can harm the kidney structure and increase the likelihood of long-term CKD development [1,2].

The good news is that obesity and its complications, such as Chronic Kidney Disease (CKD), are mostly preventable. Obesity and kidney disease can be significantly reduced by education and awareness of the risks of obesity, as well as a healthy lifestyle that includes good nutrition and exercise. On the occasion of World Renal Day 2021, this article discusses the link between obesity and kidney disease [3].

Obesity epidemiology

Overweight and obese people (BMI 25 kg/m^2) have been much more common over the last three decades all over the world. Obesity was 39% among males and 47.4 % among women in the United States in 2016-2019, according to age-adjusted data. Obesity affects both children and adults [4,5]. Obesity was prevalent in the United States between 2016 and 2019, with extreme obesity accounting for 5.8% of children aged 2 to 19. Obesity prevalence is expected to rise by 40% globally in the next decade, which is a causes for concern worldwide. As sections of Europe and the United States did decades ago, low- and middle-income countries are increasingly demonstrating signs of migrating from normal weight to overweight and obesity. The BMI (weight [kilogrammes] divided by the square of his or her height [metres]) is frequently used to define obesity. The World Health Organization (WHO) considers a BMI of 18.5 to 25 kg/m^2 to be normal weight, a BMI of 25 to 30 kg/m^2 to be overweight, and a BMI of >30 kg/m^2 to be obese [6].

Although BMI is simple to compute, it is a poor predictor of fat mass distribution since muscular people or those with more subcutaneous fat might have BMIs as high as those with more intraabdominal (visceral) fat. A high BMI in this category is linked to a much increased risk of metabolic and cardiovascular illness.

Association of obesity

Several population-based studies have found a link between obesity and the onset and progression of CKD. In those who do not have renal disease, a higher BMI is linked to the occurrence and progression of proteinuria. Furthermore, greater BMI appears to be linked with the presence and development of low estimated GFR, with more rapid loss of estimated GFR over time, and with the incidence of ESRD in multiple large population-based investigations [7]. In individuals with pre-existing CKD, higher BMI levels, particularly class II obesity and above, have been linked to a faster progression of CKD. A few studies utilising WHR or WC to look at the link between abdominal obesity and CKD found a relationship between larger girth and albuminuria and lower GFR or incidence ESR, regardless of BMI level.

Obesity has a wide range of consequences for the world's population. Kidney diseases, such as CKD, nephrolithiasis, and kidney cancer, are among the more subtle effects of obesity, but they have far-reaching negative repercussions, ultimately leading to significant excess morbidity and death, as well as increased costs to people and society. Obesity-controlling therapies at a population level may have a positive impact on avoiding or delaying the onset of CKD. It is the responsibility of the entire healthcare community to develop long-term initiatives to improve understanding of the links between obesity and kidney disease, as well as to discover the best techniques for reversing the trend. The 2021 World Kidney Day is a great opportunity to raise awareness and educate people about kidney disease.

Conflict of Interest

There are no conflicts of interest by author.

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