

### **153. Sex Differences in the Impact of Body Mass Index on Outcomes of Coronary Artery Disease in Koreans**

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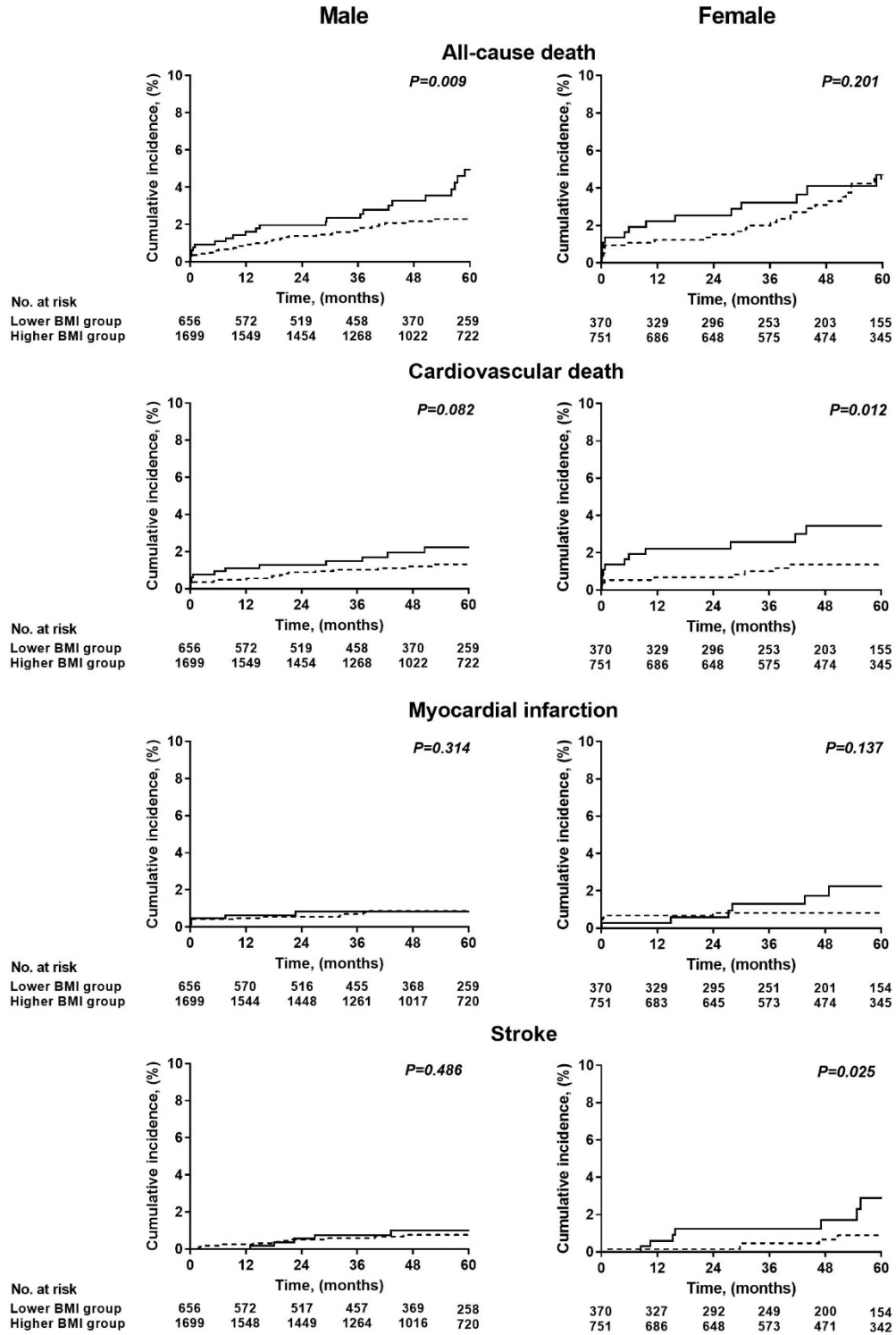
#### **Body**

**Background:** Obesity is often considered as a risk factor for cardiovascular disease, but recent studies have shown conflicting results regarding the effect of body mass index (BMI) on the prognosis of coronary artery disease (CAD) and there are limited data on whether it differs according to sex. This study aimed to evaluate the relationship between body mass index (BMI) and clinical outcomes of CAD according to sex in Korean population

**Methods:** A total of 3,476 patients enrolled who had a significant CAD and consecutively underwent percutaneous coronary intervention (PCI) with second-generation drug-eluting stents between August 2008 and December 2018. The BMI was then used in classifying the patients into the following four groups: underweight ( $<18.5 \text{ kg/m}^2$ ), normal weight ( $18.5\text{--}22.9 \text{ kg/m}^2$ ), overweight ( $23.0\text{--}24.9 \text{ kg/m}^2$ ), and obesity ( $\geq 25 \text{ kg/m}^2$ ) according to the Asia-Pacific cutoff points. Underweight and normal-weight patients were categorized as lower BMI group while overweight and obese patients were categorized as higher BMI group. The primary endpoint was all-cause mortality. The secondary endpoints included cardiovascular death, myocardial infarction, any revascularization, and stroke.

**Results:** Among women, the higher BMI group showed significant differences in the prevalence of hypertension and chest pain presentation, and among men, the higher BMI group had a significantly lower rate of chronic renal failure. Except for these, demographic, echocardiographic and angiographic data showed no significant difference according to sex and BMI group. At the end of the follow-up period (median 53.5 months), All-cause mortality was lower in the higher BMI group only in male, cardiovascular death and stroke rates were significantly lower in the higher BMI group only in female. The occurrence of myocardial infarction did not show a significant difference according to the BMI group in both males and females.

**Conclusion:** In Korean CAD patients treated with PCI, inverse correlations were observed between the clinical outcomes and BMI, but there were differences between male and female. This suggests the need for different secondary prevention strategy according to men and women.



**Clinical Implications:** My Study will help enable cardiovascular clinicians to establish appropriate secondary prevention strategies according to men and women in CAD patients treated with PCI.