Abdominal aortic aneurysms (AAAs) are quite common, having a prevalence of 4% to 7% particularly among men and those older than 65 years. AAAs are potentially fatal when they rupture, with a mortality rate up to 90%. Even after emergent operation or endovascular repair, the reported survival rate is only 40%. However, the mortality rate can be drastically reduced to 2%–6% when elective repair is performed on unruptured AAAs. Since most patients with AAA present without symptoms, the importance of screening should be emphasized. Current guidelines recommend a single ultrasound screening for men and women age 65 years or older who have smoked at least 100 cigarettes.

Recently, percutaneous endovascular aneurysm repair (EVAR) is rapidly replacing open surgical repair and providing comparable outcomes, with 30-day mortality rates of 2.9% for EVAR vs. 5.1% for open repair (p = 0.32). The importance of early detection of AAA should be highlighted more.

In this issue of the *Journal of Cardiovascular Imaging*, An et al. investigated the prevalence of AAA and evaluated predictive factors for AAA in the Korean population. The prevalence of AAA reported in this study was 2.9% (4.7% in men, 1.1% in women) in 5,679 subjects over 60 years old during routine transthoracic echocardiographic examination. This was relatively higher than a previous study performed with a larger Korean population (0.2% in 4,939 patients) even though the mean age was higher in the current study (74 ± 8 years vs. 61 ± 13 years old). The suggested predictive markers for AAA in the present study were older age, male sex, non-diabetic, dyslipidemia, ever-smoker, chronic kidney disease, and coronary artery disease, similar to previous studies. Thus, the prevalence could differ due to differences in inclusion criteria related to risk factors. Another study reported a prevalence of 2.4% in 920 Korean patients who had coronary artery disease (mean age 64 ± 10 years old).

Interestingly, diabetes has an inverse relationship with AAA, in accordance with another 17 large population prevalence studies (odds ratio, 0.80; 95% confidence interval, 0.70–0.90; p = 0.0009). Although the underlying mechanism is unclear, one possible explanation is that antidiabetic medications may slow or inhibit the growth of AAAs.
However, the rupture rate of AAAs is mostly dependent on baseline diameter and annual growth rate. Until the diameter reaches 40 mm, the rupture risk is very low. In this study only 36 patients (0.63%) had a diameter of AAA greater than 40 mm, which is a clinically meaningful measurement; annual growth rates were not evaluated, which was a limitation of this study. Another significant limitation was that this was a single-center study performed at a tertiary healthcare center; thus, the results of this study cannot be generalized to the Korean population.

Still, this study had the largest number of enrolled Korean subjects and demonstrated an increasing prevalence of AAA according to age and suggested predictive factors. Also, 2.9% of prevalence, even 0.6% of more than 40 mm AAA that should be enough numbers to make clinicians consider the evaluation of AAA screening for their patients having particular risk factors. Furthermore, routine echocardiography with some additional views and minimal effort can be used to detect AAA and has the potential to improve the outcomes of numerous patients.

REFERENCES

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