Caffeine Consumption and Atrial Fibrillation: A Risk Assessment

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Dear Editor,

Abdelfattah et al. [1] conducted a meta-analysis and a dose-response analysis to evaluate the relationship between caffeine consumption and the incidence of atrial fibrillation (AF). Although the incidence of AF did not significantly increase by coffee consumption, a lower incidence of AF was observed in subjects with caffeine consumption exceeding 436 mg/day [1]. I have a query on this study.

Caldeira et al. [2] evaluated the association between chronic exposure to caffeine and AF by a meta-analysis. The odds ratio (95% confidence interval) of low-dose caffeine for AF was 0.85 (range 0.78–0.92), and relatively higher caffeine exposure showed no significant risk for AF. Cheng et al. [3] also conducted a meta-analysis to evaluate the association between chronic exposure of caffeine and the risk of AF. The relative risk (95% confidence interval) of low-dose caffeine for incident AF was 0.89 (range 0.80–0.99). In addition, the relative risk of high-dose caf-

feine for incident AF was 0.84 (range 0.75–0.94), and there was an inverse dose-response relationship between the amount of habitual caffeine intake and incident AF. Contrary to the results by Abdelfattah et al. [1], there would be a preventive effect of caffeine intake for AF, although the amount of exposure should be confirmed by further studies.

Recently, a systematic review without meta-analysis concluded that regular intake of caffeine up to 300 mg/day would be safe or protective against atrial and ventricular arrhythmias [4], which was partly in concordance with the data found by Abdelfattah et al. [1]. There are many risk factors for AF, and continuous studies are required with special emphasis on lifestyle factors [5, 6].

Disclosure Statement

The author reports no conflicts of interest.

References

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