HYPERTENSION IN SEVERE AORTIC STENOSIS: DO ANTI-HYPERTENSIVE AGENTS INCREASE THE RISK OF SYNCOPE?

Background: The management of hypertension (HTN) in patients with aortic stenosis (AS) remains controversial. Some clinicians consider severe AS to be a relative contraindication to the use of anti-hypertensive agents. Such concern about hypotension or hypoperfusion is anecdotal and not based on published data.

Methods: We retrospectively assessed the prevalence of syncope in patients with HTN and severe AS (aortic valve area < 1 cm², mean pressure gradient > 40 mmHg, or peak aortic valve velocity > 4 m/s). Eighty-nine patients with severe AS and normal left ventricular systolic function were identified from a 2007 echocardiography database. Medical records were reviewed for demographic and outcomes data.

Results: A history of HTN was documented in 63 of the 89 patients with severe AS; 62 of these were being treated with one or more anti-hypertensive agents (mean 2.3). Over a mean follow up period of 44 months, the prevalence of syncope was not different in patients with treated HTN compared to those without HTN (8 vs. 11%, p = NS). The incidence of syncope was similar in those with treated HTN vs. those without HTN (2.7 vs. 2.9 events per 100 patient years, p = NS). Mean blood pressure in these two groups was 135/73 vs. 126/69 mmHg (p = NS). In further analysis of the 62 patients with treated HTN, those with syncope were older than those without syncope (88 +/- 6 vs. 78 +/- 9 years, p = 0.02). The mean number of anti-hypertensive agents was similar in those with vs. those without syncope (2.4 vs. 2.3 agents, p = NS). The risk of syncope was not greater in patients on three or more anti-hypertensive agents compared to those on less than three agents (7.7 vs. 8.7%, p = NS). There were no significant differences in blood pressure, ejection fraction, or indices of aortic stenosis severity in those with vs. those without syncope. Results were similar when other symptoms suggestive of cerebral hypoperfusion (e.g. presyncope) were considered.

Conclusion: The risk of syncope in patients with severe AS and treated HTN is comparable to that seen in patients with severe AS without HTN. Syncope is related to age, but not to the treatment of HTN or the number of anti-hypertensive agents. Treatment of HTN in patients with AS is not contraindicated.