

Mitral Valve Prolapse in Patients with Anorexia Nervosa: Purging vs. Restricting Type

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Background

Mitral valve prolapse (MVP) has been described in patients with anorexia nervosa (AN), potentially related to connective tissue alterations, reduced ventricular mass, or chronic volume depletion. However, comparative data between AN subtypes remain scarce.

Objective

To compare the prevalence and echocardiographic characteristics of MVP in patients with anorexia nervosa, purging type (AN-P), and restricting type (AN-R).

Methods

In this cross-sectional study, 103 female patients with AN underwent transthoracic echocardiography according to ASE guidelines (AN-P n = 45; AN-R n = 58). MVP was defined as ≥ 2 mm systolic displacement of one or both mitral valve leaflets above the mitral annulus. Statistical analyses included chi-square, independent t-test, and Mann–Whitney U test where appropriate.

Results

Patients with AN-P had a significantly higher prevalence of MVP compared with AN-R (51.1% vs. 29.3%, $p = 0.02$). Bileaflet MVP was also more frequent in AN-P (26.7% vs. 10.3%, $p = 0.03$). Among patients with MVP, maximal leaflet displacement was greater in AN-P (median 4.0 mm vs. 2.5 mm, $p = 0.03$). Mild or greater mitral regurgitation tended to be more common in AN-P (26.7% vs. 17.2%), while no significant differences were observed in indexed left atrial diameter or tricuspid regurgitation severity.

Conclusion

Mitral valve prolapse is significantly more prevalent in patients with anorexia nervosa of the purging subtype than in the restricting subtype. Purging behaviors may exert an additional adverse impact on mitral valve structure and function, reflected by greater leaflet displacement and more frequent regurgitation. These findings support consideration of cardiovascular screening, particularly echocardiography, in high-risk AN patients.

Keywords

Anorexia nervosa; mitral valve prolapse; purging type; echocardiography; cardiovascular complications.