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Estimated Surgical Risk in Patients with Severe Mitral Regurgitation: Implications for Transcatheter Mitral Valve Interventions

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Background:
The definitive treatment for mitral regurgitation (MR) is surgical, but many patients with MR are elderly with multiple co-morbidities and a high surgical risk. Recently, transcathetertechniques (percutaneous mitral clip and annuloplasty) are being increasingly used in high-risk patients. The objective of this study was to assess the risk of mitral valve surgery in patients with severe MR in order to determine the proportion of patients who are potential candidates for transcatheter therapy.

Methods:
The study population included consecutive patients with an echocardiographic diagnosis of severe MR who were examined at our tertiary care medical institution during a 36 months period. Non- hospitalized patients (comprehensive clinical data not available) and repeat studies wereexcluded (data from the most recent study in each patient was analyzed). The hospital records and echocardiographic reportswere reviewed in order to collect data on cardiac pathologies and non- cardiac co- morbidities. Surgical risk was calculated using the *STS* and *EuroSCORE II* risk scores.

Results:
The major echocardiographic findings and estimated surgical risk in the total study population (236 patients, age 71±14 yrs, 61% male) and in age subgroups (<70 yrs, 70-79 yrs, ≥80 yrs) are presented in the Table (M&M = mortality and major morbidity; MV = mitral valve; *median values and 25-75 percentiles in parentheses). Approximately one third of the patients were very elderly (≥80 yrs old) with multiple extra-cardiac co-morbidities and a high surgical risk.Furthermore, a non-negligible proportion of patients in the intermediate age group (age 70-79 yrs) had high surgical risk as well.

Conclusions:
Co-morbidities are frequent and surgical risk is high in the majority of very elderly patients (≥80 yrs old) as well as in a significant proportion of relatively younger patients (70-79 yrs old) with severe MR. These findings support the expanding use of transcathetertechniques for the treatment of MR.