

Emerging indications, in-hospital and long-term outcome of balloon aortic valvuloplasty in the transcatheter aortic valve implantation era

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AIMS

The introduction of transcatheter aortic valve implantation (TAVI) has generated a renewed interest in the treatment of high-risk patients with severe aortic stenosis. This study describes the indications and long-term outcome of balloon aortic valvuloplasty (BAV) in recent years.

METHODS AND RESULTS

Between 2000 and 2010, 415 consecutive patients at our institution underwent BAV. The number of BAV per year increased sharply after the introduction of TAVI. Patients were 77.5 ± 10.9 years old and showed important comorbidities (average logistic EuroSCORE = $23.9 \pm 15.3\%$). We identified four cohorts according to the indications: 1) bridge for TAVI (B-TAVI; n=162); 2) bridge for aortic valve replacement (B-AVR, n=97); 3) cardiogenic shock (n=23); 4) palliation (n=133). Baseline characteristics were significantly different among groups. In-hospital mortality was 5.1%, and occurred predominantly in patients who underwent BAV in the setting of cardiogenic shock (56.5% vs. around 2% in the other subgroups). Other major events were stroke (0.5%), major vascular complications (2.2%), and life-threatening bleedings (1.5%). The cumulative one-year and two-year mortality rates were 33.2% and 57.4%, respectively, with the highest incidence in the shock group (70.7% and 80.4%) and the lowest in the B-AVR group (21.7% and 38.4%). Rehospitalisation for heart failure was 26.3% at one-year and 47.2% at two-year follow-up.

CONCLUSIONS

The number of BAV is increasing, mainly due to increased referral of high-risk patients and to the emerging indication of bridge for TAVI. In this complex population, BAV is relatively safe but two-year survival remains **poor, and more effective and definitive treatments should be pursued in a timely fashion.**