



8th CHALLENGES in CARDIOLOGY

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Intra-aortic balloon pump in elderly patients When over 70, does age matter?

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Intraaortic Balloon Support for Myocardial Infarction
with Cardiogenic Shock

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Introduction: Since the publication of the IABP-SHOCK II trial⁽¹⁾ in 2012, intra-aortic balloon pump (IABP) for cardiogenic shock use was restricted to selected patients. Younger age was the only statistically significant result indicating better outcome with IABP implantation in that trial, but no specific evaluation for the elderly was performed.

**Aim &
Methods:**



Monocentric retrospective longitudinal trial;
Patients admitted between 2012 and 2016;

Submitted to IABP implantation

To identify if increasing age has a
prognostic impact

Binary-logistic regression model with all
significant data to determine mortality predictors

Demographic, clinical and laboratorial data, past medical history and coronary anatomy information were included. Left ventricular ejection function (LVEF), evaluated in less than 24 hours after admission, was registered. Main outcome was the occurrence of death during 1 year follow-up.

Results:

Patients submitted to IABP implantation = 599;

- Over 70 years olds = 289 (48,2%)

- Due to cardiogenic shock = **119** (19,9%)

Mortality

N = 67
(56.3%)

All during index event

Female gender: 50.4% (n=60)

Mean age: 76.9 ± 5.1 years

Acute coronary syndrome: 94,1% (n=113)

- 72% (n=81) angioplasty, 11% (n=13) CABG

Total balloon time < 3 dias: 70,6% (n=83)

Total admission time: 10,5 ± 3,0 days

Vascular complications: 15.9% (n=19)

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	Death (n=67)	No death (n=52)	P-value
Age (years)	77.9±5.2	75.5±4.7	0.008
Age ≥ 80 years old (n, %)	9 (13,4)	18 (34,6)	0.068
Hypertension (n, %)	52 (78,8)	40 (76,9)	0,826
Diabetes <i>mellitus</i> (n, %)	29 (43,9)	20 (38,5)	0,577
Dyslipidemia (n, %)	45(68,2)	33 (63,5)	0,696
Previous stroke (n, %)	7 (10,4)	2 (3,8)	0,296
Smokers (n, %)	5 (7,6)	8 (15,4)	0,239
Admission time (days)	6,5±19,6	15,7±18,4	0.002
Creatinine clearance (mL/min/1.73m ²)	36.6±3.5	56.0 ±3.9	0.003
Body mass index (kg/cm ²)	27.5 ±3,6	29.5 ±2,4	0.358
LVEF < 30% (n, %)	55 (82,4)	9 (17,6)	<0.001

After multivariate analysis

LVEF < 30 % (OR = 16.0, 95CI 12.2-21.1, p = 0.035) was the **only** independent mortality predictor.

Conclusion

- In patients over 70 years old with IABP implantation due to cardiogenic shock, **LVEF was the only independent mortality predictor.**
- In the elder, increasing age does not predict worse outcomes
 - Main focus for prognosis stratification should be to **evaluate LVEF.**