

## ABSTRACTS - 28<sup>th</sup> EACTS

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### RED BLOOD CELL DISTRIBUTION WIDTH PREDICTS MORBIDITY AND MORTALITY AFTER AORTIC VALVE REPLACEMENT

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**Objectives:** Red blood cell distribution width (RDW) is a numerical measure of the variability in size of circulating erythrocytes and is emerging as a strong predictor of adverse events for several categories of patients affected by cardiovascular disease. However, no data exist until now about the role of RDW in predicting mortality of aortic valve replacement (AVR) patients. Thus, in this pilot study we evaluated the value of RDW on early outcome following AVR.

**Methods:** We enrolled 75 patients, who underwent AVR with or without

concomitant procedure. A high value of RDW was defined as >43 fL for women and 47 fL for men. Multivariable and univariable analysis were used in determining the association between preoperative high RDW and postoperative outcome.

**Results:** The prevalence of preoperative high RDW was 41% (31 patients). Univariable analysis showed that patients with high RDW were older ( $P < 0.02$ ), with low weight ( $P = 0.12$ ) and high level of platelets ( $P = 0.005$ ). Patients with high RDW were more likely to require renal replacement therapy ( $P < 0.026$ ) and prolonged ventilation ( $P < 0.01$ ). Following multivariable adjustment, higher preoperative RDW was a combined predictor of mortality with higher creatinine level ( $P = 0.065$ ).

**Conclusion:** Increased RDW seems to be a good predictor of early outcome in patients who underwent AVR, in particular in patients with preoperative renal impairment and postoperative prolonged ventilation.