

## P2757

**Embolitic risk stratification and prognostic impact of early surgery in left-sided infective endocarditis**

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**Background:** Surgery is performed in 50% to 60% of infective endocarditis. In patients with definite surgical indication for heart failure and with large vegetation, early surgery prevents embolic events. The optimal timing of surgery for other indications is still debated. Moreover, patients with large vegetation as unique indication to surgery, have a weak class of recommendation to it. Accurate risk stratification for embolic events is desirable to optimize selection of surgical candidates.

**Materials and methods:** We retrospectively analyzed 195 consecutive patients (72 women and 123 men) admitted to our department between 2013 and 2017 with definite IE according to modified Duke University criteria. Transesophageal echocardiography and blood cultures were performed in all patients for confirmation of diagnosis. Systemic embolism was sought on admission clinically and with imaging techniques (Brain and chest CT plus abdominal CT or US scan). Seventy-seven percent of patients underwent surgery (valve repair or replacement). Outcome following discharge was systematically assessed by structured telephone interviews.

**Results:** Of the 195 patients with left sided IE, 151 underwent surgery, 29 were low risk and treated medically, 5 refused surgery and 10 were not operated due to high surgical risk. Overall survival was 78% at 4 years. Patients excluded from surgery had the worst prognosis, while operated

patients with high-risk IE showed comparable survival to non-complicated infections treated medically. Early surgery (<2 weeks from diagnosis) was associated with similar survival compared to later intervention. Euroscore II was the main predictor of mortality when above a threshold of 7 before 2015 and 16 after 2015, reflecting surgical management of higher risk patients over time. In left sided IE, mean vegetation length was 11.1 mm; embolic events before diagnosis occurred in 35% of cases and *Staphylococcus aureus* etiology was the main risk factor associated with embolism (OR 4,  $p < 0.05$ ). Vegetation size >10 mm was also independently associated with embolic risk ( $p = 0.033$ ) whereas renal failure, age, sex, endocarditis location (mitral or aortic), type of valve (native or prosthetic), perivalvular extension and degree of valvular regurgitation were not.

**Conclusions:** Compared to low-risk IE patients treated medically, those at high-risk showed comparable survival when managed surgically, whereas a conservative approach was associated with adverse prognosis. In patients with left sided IE and intermediate vegetation length, *S. aureus* infection was the best independent predictor of systemic embolic events. Our data support extensive surgical referral in high risk IE and suggest that its etiology represents an important factor in decision-making.