Abstract: **P1132**

**Central nervous system complications in patients with infectious endocarditis: population characterization and predictors of embolization**

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**Topic(s):**
Valvular Heart Disease – Epidemiology, Prognosis, Outcome

**Citation:**

Introduction: Infectious endocarditis (IE) is one of the major causes of morbidity and mortality in patients (pts) with valvular heart disease. Among the morbidity causes, cerebral embolism represents an important burden of disability.

Aim: To characterize patients with infectious endocarditis and neurological complications and to determine predictors of central nervous system (CNS) embolization

Methods: We analysed a population of pts with suspected/confirmed infectious endocarditis, according to Duke criteria, in the last 12 years (2006-2017). The clinical and imaging data were collected as well as complication rates and mortality data.

Results: We included 174 pts, 36,8% had evidence of systemic embolization. The most frequent embolization site was CNS (n=34, 19,5%). Pts with CNS embolization were predominantly male (73,5%), with a mean age of 62±11 years old. 58,8% had hypertension (HTN), 41,2% diabetes (DM), 17,6% chronic kidney disease (CKD). 8,8% were iv drug users, 11,8% had active cancer and 5,9% were HIV positive. None had right-sided valves involvement. The most common microbiologic agents were staphylococcus and streptococcus (both corresponding to 29,4%). 20,6% of pts had no agent isolation. 79,4% had ischemic stroke (haemorrhagic transformation in 20,6%), 14,7% had haemorrhagic stroke, 14,7% mycotic aneurism, and 2,9% had myelitis/meningitis. 35,3% had recurrence of stroke (including both ischemic and haemorrhagic). In-hospital mortality was 35,3%.

Comparing to global population, there were no differences between both groups in what concerns sex (n=0,663), HTN (n=0,964), CKD (p=0,734), IV drug (p=0,463) and HIV (p=0,407). There were no differences between ages or affected valve (mitral vs aortic).

CNS embolization group were more likely to have diabetes (41,2% vs 12,5% p=0,009), prosthetic valve endocarditis (35,3% vs 6,3% p=0,004) and global complications (82,4% vs 44,8% p=0,002), especially heart failure (HF) (44,1% vs 13,8% p=0,009). They were more associated with invasive procedures in the last 3 months (teeth procedures included) (35,7% vs 11,1% p=0,032). In addition, they had longer hospitalizations (53 vs 38 days, p=0,021).

On the other hand, they less frequently had anemia (41,2% vs 71% p=0,016) and fever (58,8% vs 83,9% p=0,027) at presentation. No differences were found in what concerns echocardiographic changes or survival between the two groups.

In multivariate logistic regression, the only independent risk factors were the absence of anemia (OR: 0,066 95%C.I 0,009-0,467 p=0,006) and prosthetic valve EI (OR: 22 95% CI 1,3-374 p=0,032).

Conclusions: For the population studied, CNS embolization was a common complication (especially isquemic
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Conclusions: For the population studied, CNS embolization was a common complication (especially ischemic stroke) associated to longer hospitalizations. Multiple regression showed that the absence of anemia and the prosthetic valve EI were the only independent predictors of this important morbidity cause.