

INTRODUCTION

Infective endocarditis can lead to multiple complications, so its early identification and treatment is of vital importance. Data on prognostic factors associated with higher mortality in these patients in Colombia are scarce and are part of studies with a limited number of patients. This is the first multicentric study with the aim of reaching a representative number of patients with endocarditis.

METHODS

Observational, multicenter, analytical, historical cohort study, which was conducted in 4 high-complexity hospitals in Colombia from 2007 to 2017. The target population was adult patients hospitalized between the years 2007 and 2017.

RESULTS

Characteristics of patients diagnosed with infective endocarditis

Variable	Total n=308 (%)	Alive n=207 (%)	Dead n=101 (%)
Age	59 (16.43)	56.5 (17.21)	64.11 (13.41)
Male sex	226 (73.4)	149 (65.9)	77 (34.1)
Prior heart failure	97 (31.6)	57 (27.7)	40 (39.6)
Previous hemodialysis	40 (13.0)	16 (7.7)	24 (23.8)
Prosthetic valve	53 (17.2)	33 (15.9)	20 (19.8)
Persistent bacteremia	58 (18.8)	44 (21.3)	14 (13.9)
<i>S. aureus</i>	89 (28)		

RESULTS

Complications derived from IE

Complication	Total	Alive	Dead
Need for RRT	69 (22.4)	23 (11.1)	46 (45.5)
Development of heart failure	101 (32.8)	59 (28.5)	42 (41.6)
Embolism to other organ	58 (18.8)	39 (18.8)	19 (18)
CNS embolism	77 (25.0)	39 (18.8)	38 (37.6)
Surgical indication	199 (64.6)	133 (64.3)	66 (65.3)
Surgery during Hospitalization	157 (51.0)	121 (58.5)	36 (35.6)
Timely surgery	155 (50)	120 (57)	35 (34)

Multivariate analysis of mortality with prehospital variables.
Prediction model AUC 0.78 (CI 95% 0.72-0.84)

Variable	OR	CI	P value
Age	1.02	1.00 – 1.04	0.040
Prosthetic valve time (years)	1.05	1.03 – 1.08	<0.001
Previous GFR (CKD EPI formula)	0.98	0.98 – 0.99	<0.001
Previous LVEF	1.01	0.99 – 1.04	0.331
Previous heart failure	1.61	0.82 – 3.19	0.169
Previous coronary Disease	0.63	0.30 – 1.29	0.215

Multivariate analysis of mortality with hospital variables.
Prediction model AUC 0.91 (95% CI 0.85-0.97)

Variable	OR	CI	P value
RRT during hospitalization	59.8	14.1 – 37.7	<0.001
CNS embolism	1.681	0.53 – 5.30	0.371
Surgery	0.07188	0.01 – 0.27	<0.001
Vegetation size (mm)	1.095	1.0 – 1.2	0.042
Severe mitral valve compromise	1.508	0.30 – 8.25	0.619
Tricuspid IE	0.02721	0.00 – 0.30	0.013

DISCUSSION

The main risk factor associated with in-hospital mortality is the development of acute kidney injury with an indication for RRT. In these patients a higher frequency of *S. aureus*, previous pathologies such as arterial hypertension and diabetes mellitus, lower GFR on admission and larger vegetation size were found.

Surgical management was associated with a better prognosis regardless of time of procedure during hospitalization.

Future studies are required for the validation of a score with the chosen pre-hospital and hospital variables that guide the stratification of these patients.