

INFECTIVE ENDOCARDITIS IN HYPERTROPHIC CARDIOMYOPATHY

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Purposes:

Infective endocarditis (IE) complicating hypertrophic cardiomyopathy (HCM) is a poorly known entity. Although current guidelines do not recommend IE antibiotic prophylaxis (IEAP) in HCM, controversy remains. This study sought to describe the clinical course of IE in HCM and analyze if HCM patients should receive IEAP.

Methods:

2011 patients with IE from 27 Spanish hospitals were studied. Clinical, microbiological and echocardiographic characteristics were analysed in IE HCM patients (n=34) and in IE HCM reported in literature (n=84). After excluding 202 subjects with cardiac device-related IE, 1807 were classified into 3 groups: **Group 1:** HCM with native valve IE (n=26); **Group 2:** patients with IEAP indication (n=696); **Group 3:** patients with no IEAP indication (n=1085).

Results:

IE HCM patients exhibited 1-year mortality of 41% in our study and 22% in literature. IE was more frequent in HCM with LVOTO (74%). **(Figure 1)** Group 1 (native valve IE HCM) exhibited a higher prevalence of predisposing factors than Groups 2 and 3 (62% vs 40% vs 50%; p<0.01), more previous dental procedures (23% vs 6% vs 8%; p<0.01) and a higher incidence of Streptococcus infections than Group 2 (39% vs 22%; p<0.01), but similar to Group 3 (39% vs 30%; p=0.34). Overall mortality was similar among groups (42% vs 36% vs 35%; p=0.64). **(Tables 1 and 2)**

Figure 1. Clinical, echocardiographic and microbiological features of 34 HCM patients with IE.

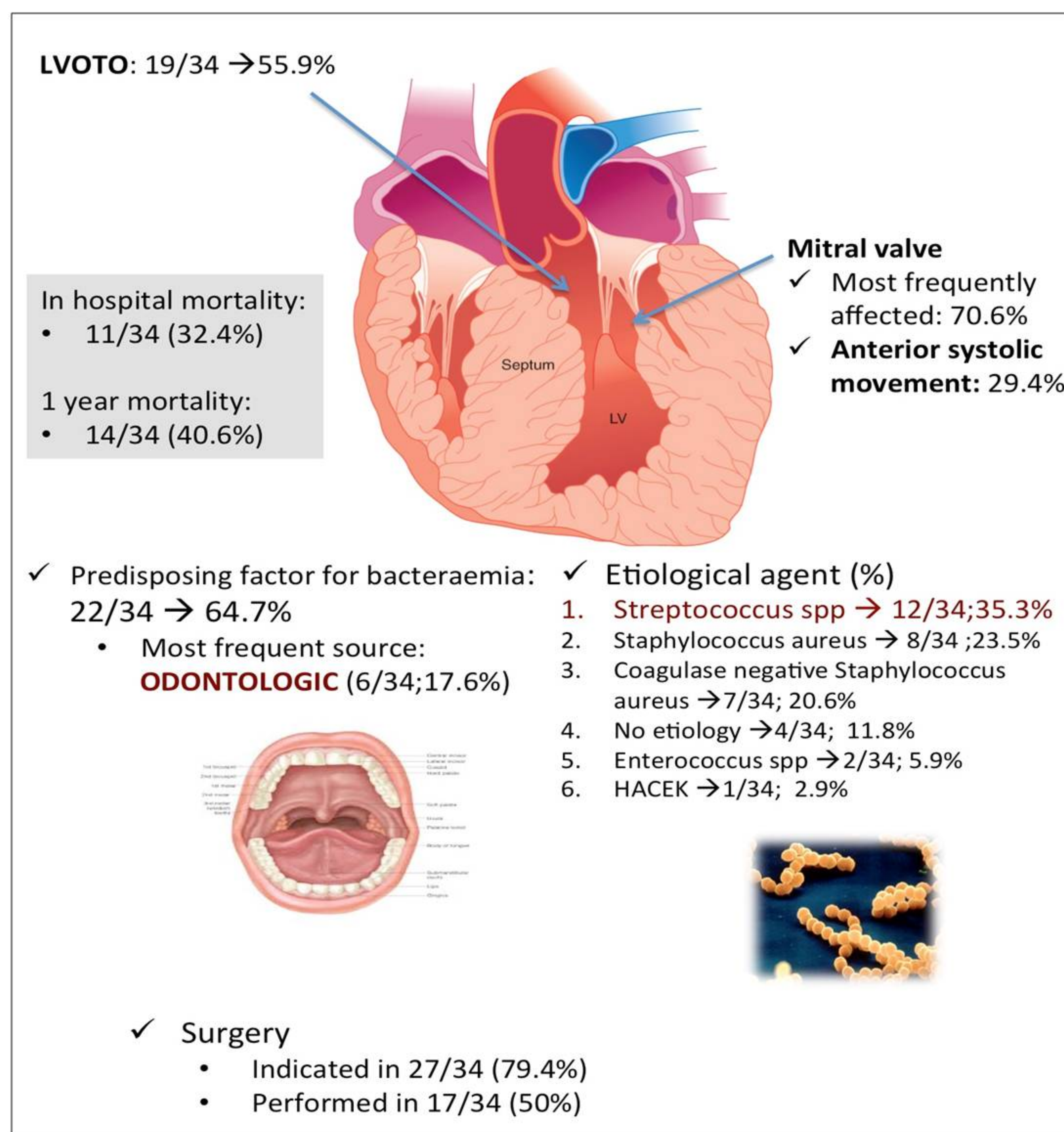


Table 1: Native valve IE HCM patients vs. IE patients with indication for IE antibiotic prophylaxis

	HCM (n=26)	IE with prophylaxis indicated (n=696)	p
Median age (IQR)	63.5 (56.0 - 77.7)	69 (57.2 - 76.0)	0.574
Male (%)	14 (53.8)	469 (67.5)	0.147
Affected valve			
Aortic	9 (3.6)	438 (62.9)	0.004
Mitral	22 (84.6)	864 (41.5)	<0.01
Pulmonar	0	12 (1.7)	0.508
Tricuspid	0	21 (3.0)	0.378
Native valve	26 (100.0)	158 (22.7)	<0.01
Prosthetic valve	0 (0)	559 (80.3)	<0.01
Suspected predisposing factor (%)	16 (61.5)	278 (40.1)	0.028
Dental	5 (22.7)	41 (6.0)	0.002
Genitourinary	0	25 (3.5)	0.359
Cutaneous	2 (9.1)	30 (4.4)	0.302
Vascular	5 (19.2)	112 (16.1)	0.675
Gastrointestinal	3 (11.5)	42 (6.1)	0.257
Respiratory	0	4 (0.6)	0.698
Others	1 (3.8)	31 (4.5)	0.271
Etiology (%)			
Staphylococcus coagulase negative	5 (19.2)	175 (25.1)	0.491
Staphylococcus aureus	7 (26.9)	103 (14.8)	0.091
Enterococcus spp	1 (3.8)	100 (14.4)	0.129
Streptococcus spp	10 (38.5)	152 (21.8)	0.046
Others	1 (3.9)	103 (14.8)	0.122
Negative blood cultures	2 (7.7)	63 (9.1)	0.812
Surgery (%)			
Indicated	19 (73.1)	452 (65.3)	0.342
Performed	11 (42.0)	309 (44.4)	0.883
Mortality (%)			
In-hospital mortality	8 (30.8)	214 (30.7)	0.998
IE related mortality during follow-up	0	17 (2.4)	0.474
Non-IE related mortality during follow-up	3 (11.5)	21 (3.0)	0.001
Total one-year mortality	11 (42.3)	252 (36.2)	0.526

Table 2: Native valve IE HCM patients vs. IE patients with no indication for IE antibiotic prophylaxis

	HCM (n=26)	IE with prophylaxis not indicated (n= 1085)	p
Median age (IQR)	63.5 (56.0 - 77.7)	68 (55.0 - 77.0)	0.728
Male (%)	14 (53.8)	730 (67.4)	0.233
Affected valve			
Aortic	9 (34.6)	496 (45.7)	0.337
Mitral	22 (84.6)	574 (52.9)	0.001
Pulmonar	0	16 (1.5)	0.533
Tricuspid	0	76 (7.0)	0.162
Native	26 (100.0)	1085 (100)	-
Prosthetic	0 (0)	0 (0)	-
Suspected predisposing factor (%)	16 (61.5)	542 (50.1)	0.247
Dental	5 (22.7)	80 (7.5)	0.009
Genitourinary	0	74 (7.0)	0.2
Cutaneous	2 (9.1)	79 (7.4)	0.772
Vascular	5 (19.2)	182 (16.8)	0.741
Gastrointestinal	3 (11.5)	91 (8.4)	0.568
Respiratory	0	17 (1.6)	0.520
Others	1 (3.8)	58 (5.3)	0.736
Etiology (%)			
Staphylococcus coagulase negative	5 (19.2)	97 (8.9)	0.232
Staphylococcus aureus	7 (26.9)	290 (26.7)	0.982
Enterococcus spp	1 (3.8)	154 (14.2)	0.132
Streptococcus spp	10 (38.5)	323 (29.8)	0.268
Others	1 (3.9)	122 (11.3)	0.235
Negative blood cultures	2 (7.7)	99 (9.1)	0.848
Surgery (%)			
Indicated	19 (73.1)	668 (61.8)	0.371
Performed	11 (42.3)	449 (41.4)	0.925
Mortality (%)			
In-hospital mortality	8 (30.8)	298 (27.5)	0.709
IE related mortality during follow-up	0	24 (2.2)	0.523
Non-IE related mortality during follow-up	3 (11.5)	56 (5.1)	0.016
Total one-year mortality	11 (42.3)	378 (34.8)	0.43

Conclusions: IE occurs in HCM patients with and without obstruction. Mortality of IE HCM is high but similar to patients with and without IEAP indication. Predisposing factors, previous dental procedures and streptococcal infection are higher in IE HCM, suggesting that HCM patients could benefit from IEAP.