

## Endocarditis caused by anaerobic bacteria.

**Authors:** P. Muñoz (1), M. Kestler (1), M.A Goenaga (2), P. Idígoras Viedma (2), A. de Alarcón (3), J.A. Lepe (3), D. Sousa Regueiro (4), J.M. Bravo-Ferrer (4), M. Pajarón (5), A. Moreno (6), M.V. García-López (7), C. Hidalgo-Tenorio (8), M. Moreno (9), E. Bouza (1) on behalf of the Spanish Collaboration on Endocarditis-Grupo de Apoyo al Manejo de la Endocarditis Infecciosa en España (GAMES)

- (1) H.G.U. Gregorio Marañón (Madrid)
- (2) H.U. Donosti (San Sebastián)
- (3) H.U. Virgen del Rocío (Sevilla)
- (4) Complejo Hospitalario Juan Canalejo (A Coruña)
- (5) H.U. Marqués de Valdecilla (Santander)
- (6) H.U Central de Asturias (Oviedo)
- (7) H. U. Virgen de la Victoria (Málaga)
- (8) H. U. Virgen de las Nieves (Granada)
- (9) H.U. La Paz (Madrid)

### ABSTRACT

#### BACKGROUND

Infective endocarditis (IE) caused by anaerobic bacteria is a rare and poorly characterized disease which, accounted for 2-16% of all cases of IE over the past decades. Besides, most of the data collected in the literature consist of case reports. The Spanish Endocarditis Study Group (GAMES) database was created in 2008; since then, all cases with definite infective endocarditis have been prospectively enrolled.

#### METHODS

Prospective study, from January 2008 to March 2013 in 26 Spanish centers. The resultant GAMES database contained 1643 cases of IE, as defined using the Duke criteria. Among these, 34 cases of definitive anaerobe infective endocarditis (AIE), were identified and included in this analysis.

#### RESULTS

Anaerobic bacteria caused, 34 (2.1%) of the definite infective endocarditis. Median age of the cohort was 57.8 years (IQR 50.7-69.5) and 28 (82.4%) patients were men. Most of the patients (19; 55.8%) had native valve IE and most episodes were left-sided: mitral 13 (68.4%) / aortic valves 9 (47.3%). Site of acquisition was as follows: 28 (84.8%)

episodes were community acquired; 4 (12.1%) health care-related and 1 (3.0%) nosocomial. Most common pathogens were *Propionibacterium* spp 9 patients (26.5%), *Aggregatibacter actinomycetemcomitans* and *Gemella* spp; 7 patients (20.6%) each. A total of 22 of 34 patients (64.7%) received a single antibiotic as primary medical treatment and 19 (55.9%) underwent cardiac surgical intervention. Overall mortality was 5.9% during admission and 3.3 after 1 year follow-up. When anaerobic IE were compared to the rest of the cohort, we found that patients with anaerobic endocarditis were younger (mean age 57.8 vs 68  $p= 0.01$ ), had a lower Charlson comorbidity index (3.2 vs 4.0  $p< 0.01$ ), were more likely to have community acquired IE (84.8% vs. 61.4%,  $p= 0.03$ ) and had a significantly lower mortality during admission (5.9% vs. 28.4%,  $p <0.01$ ).

## CONCLUSION

Infective endocarditis due to anaerobic bacteria is an uncommon disease that accounts for 2.1% of all cases of infective endocarditis in our series, and is significantly more frequent in middle age males, without serious underlying diseases, with an odontogenic origin and lower mortality rate.