INTRODUCTION

Blood culture-negative infective endocarditis (IE) can occur in up to 31% of all cases of IE and often poses considerable diagnostic and therapeutic dilemmas. Both Bartonella and Coxiella are intracellular bacteria involved in IE with negative blood cultures.

OBJECTIVES

We aim to compare patients with infective endocarditis (IE) due to Bartonella spp and Coxiella burnetti regarding their prevalence, clinical presentation and management.

METHODS

• A retrospective study (1994 - 2013)
• N= 290 patients with IE diagnosed according to modified Duke's criteria.
• Comparative analysis between 2 groups:
  – G1= Bartonella spp IE; 25 patients
  – G2= Coxiella burnetti IE; 12 patients

RESULTS

> Prevalence : Bartonella spp. IE was twofold more frequent than Coxiella IE (Figure 1).

![Figure 1: Prevalence of Bartonella and Coxiella IE](image)

> Clinical features:

There was no clinical particularities between 2 groups unless pallidness which was more outlined in patients with Coxiella IE (Table I).

> Biological findings:

White blood cells was the sole finding significantly higher in patients with Bartonella IE. Elsewhere, similar biological findings were noted between 2 groups (Table II).

> Electrocardiography:

VEGAN and Coxiella IE were abnormal in 40% of patients when IE was secondary to Bartonella spp (Figure 3). All patients with Coxiella IE had a positive serological testing.

> Molecular biology with PCR of surgical material was performed in 8 patients with Bartonella IE and in 4 patients with Coxiella IE.

In summary, IE affected predominantly native valve (88% in G1 and 66.7% in G2; p=0.18).

> Mean delay of consultation was far longer in patients with Coxiella IE (158.4 ± 229 days vs. 5.6 ± 7.3 days when Bartonella spp was implied; p=0.013).

> Regarding in-hospital stay, there was no difference between 2 groups as mean duration of hospitalization was 50.7 ± 39 days in G1 and 58.1 ± 38 days in G2 (p=0.6).

> Empirical antibiotics:

Among overall study population, penicillins and gentamicins were prescribed in 18 and 23 patients respectively. They had Bartonella IE in 83.4 and 68% of cases respectively.

Fluoroquinolones were used in 23 patients.

Second line antibiotic therapy:

Only 3 patients in G2 were treated with Doxycycline and hydroxychloroquine.

Mean period of treatment was far longer in G2 (742 ± 429 vs. 54 ± 38 days; p=0.0001).

> Referral to surgery:

No difference was outlined between 2 groups regarding the need of surgical correction of IE devastating damage. The main reasons leading to surgery was hemodynamic complications (Table IV).

> Mortality rate:

• In hospital mortality was equally recorded (24% in G1 vs. 16% in G2; p= NS).

• Late mortality rate was similar in both groups (29% in G1 vs. 28% in G2; p= NS).

• Recurrence rate was 8% among patients with Bartonella IE (Follow up duration was at mean 32 ± 50 days)

Conversely, no patient with Coxiella IE had recurrence with a mean follow up duration of 633 ± 457 days.

REFERENCES
