

Left-side endocarditis and liver, splenic or renal involvement in computed tomography (CT)

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Background: Despite the improvement in the diagnosis and treatment of left-sided endocarditis (LS-IE) emboli are still a relatively common complication. Our aim was to study whether patients with LS-IE presenting liver, splenic or renal (LSR) involvement on CT, had different clinical features, therapeutic plans, and prognosis than those without these lesions.

Methods: The study was carry out in patients collected by the Spanish Collaboration Group on Endocarditis (GAMES) since January 2008 to September 2012 in 25 Spanish hospitals. The existence of LSR lesions was investigated performing an abdominal CT, at the discretion of the doctor who treated the patient. Patients with LSR lesions in CT (Group 1) were compared to patients with no LSR lesions on CT (Group 2).

Results: One thousand patients with LS-IE according to Duke University criteria were included in the study. One hundred forty seven had an abdominal CT performed (92.5% after the administration of an endovenous contrast agent). Fifty (34%) patients had LSR lesions (group 1): 46 splenic infarcts, 15 kidney infarcts and 2 liver abscesses. The median time between hospital admission and the abdominal CT was 6 d (IQR 4-14) in group 1 and 8 d (IQR 4-22) in group 2. The median age was 63 y (IQR 51-76) in the group 1 and 68 y (IQR 61-77) (P=0.06) in group 2. There were 42 men in group 1 and 62 in group 2 (P=0.01). Mitro-aortic valve involvement was seen in 10 (20%) patients in group 1 and 8 (8.2%) in group 2 (P=0.01). Predispose conditions, site of acquisition, clinical characteristics, microbiology and surgical treatment were similar in both groups. Splenomegaly was significantly more frequent in group 1: 31 (21%) vs.13 (13.4%) (P=0.004), as well as the non-abdominal emboli: 64 (43.5%) vs. 32 (33%) (P=0.001). Patients in group 1 had a higher number and a big size of vegetations, however no statistically differences were found. Duration of hospitalization was similar in both groups (median= 47 d (IQR: 29-59.5) in group 1 versus 48 d (IQR: 29.7-57.5) in group 2. Hospital death or one-year mortality was higher in the group 1 but did not reach significant differences. Hospital death: 13 (26%) in group 1 and 22 (23%) in group 2. One-year mortality: 7 patients (14 %) group 1, vs. 7 (7.2%) in group 2.

Conclusion: Predispose conditions, clinical presentation and antibiotic and surgical treatment are similar in patients with or without LSR lesions. LSR embolisms appear do not increase the need of cardiac surgery or the risk of death.

Key words

Left side endocarditis

Splenic infarctation

Renal infarctation

Liver abscess

Computed tomography