



chart items, the following definitions were used.

**An infection is said to be associated with care:** If it occurs during or after the treatment (diagnostic, therapeutic, palliative, preventive or educational) of a patient, and if it was neither present nor incubating at the beginning of the treatment [8].

**Bacteremia:** It is defined as the presence of at least one positive blood culture (justified by clinical signs), except for the following organisms:

- Coagulase-negative  
*B* spp. (except *B. anthracis*)  
*C* spp.  
*M* spp.

or other saprophytic or commensal microorganisms with comparable pathogenic potential, for which two positive blood cultures for the same microorganism, taken at different punctures, at different times, and within a short interval (a maximum of 48 hours is usually used), are required [10]. This bacteremia must occur 48 hours after admission or contact with the health care facility to be considered as associated with care.

#### Multiresistant Bacilli (MRB)

These are extended-spectrum beta-lactamase-secreting Enterobacteriaceae (ESBL), methicillin-resistant, and *A* resistant to ticarcillin and/or ceftazidime, and *G* with decreased susceptibility to penicillin G.

**Non-identified:** Patients treated for bacteremia whose records were incomplete and unusable, i.e., without documentation of blood culture data, were not included.

**Data Collection:** Data were collected from a standard questionnaire including:

- Socio-demographic characteristics: age, sex, geographical origin and profession
- Bioclinical characteristics: reasons for hospitalization,

site of infection, comorbidities, history of hospitalization, previous antibiotic therapy, blood count, urea, creatinine, C-reactive protein, aspartate aminotransferases, alanine aminotransferases, Prothrombin Level (PT), bacteriological data and resistance profile of isolated bacteria

- Evolutionary and therapeutic data

version 7 software and the exploitation was done with R software. The qualitative variables were expressed in proportions and the quantitative variables in mean standard deviation in case of normal distribution, in median with the extremes if necessary. For the bivariate analysis, the factors associated with death were identified by comparing the different variables. The difference was statistically significant if  $p < 0.05$ .

#### Results

##### Epidemiological aspects

During our study period, 52 cases of associated bacteremia were recorded out of a total of 1987 hospitalized patients, i.e., a hospital prevalence of 2.6%. The total number of Healthcare-Associated Infections (HCAI) was 123 cases, i.e. a proportion of bacteremia of approximately 42.3%. The predominant sex was male with an M/F ratio of 1.2. The average age was  $42 \pm 16$  years and the 40-60-year age group represented more than half of the patients (51.9%). The majority of patients lived in suburban (46.2%) and rural (42.3%) areas. Among the 52 cases of healthcare-associated bacteremia, 22 were living with HIV (42%). Other comorbidities such as chronic renal failure (4%), diabetes (2%) and high blood pressure (2%) had also been found (Table 1).

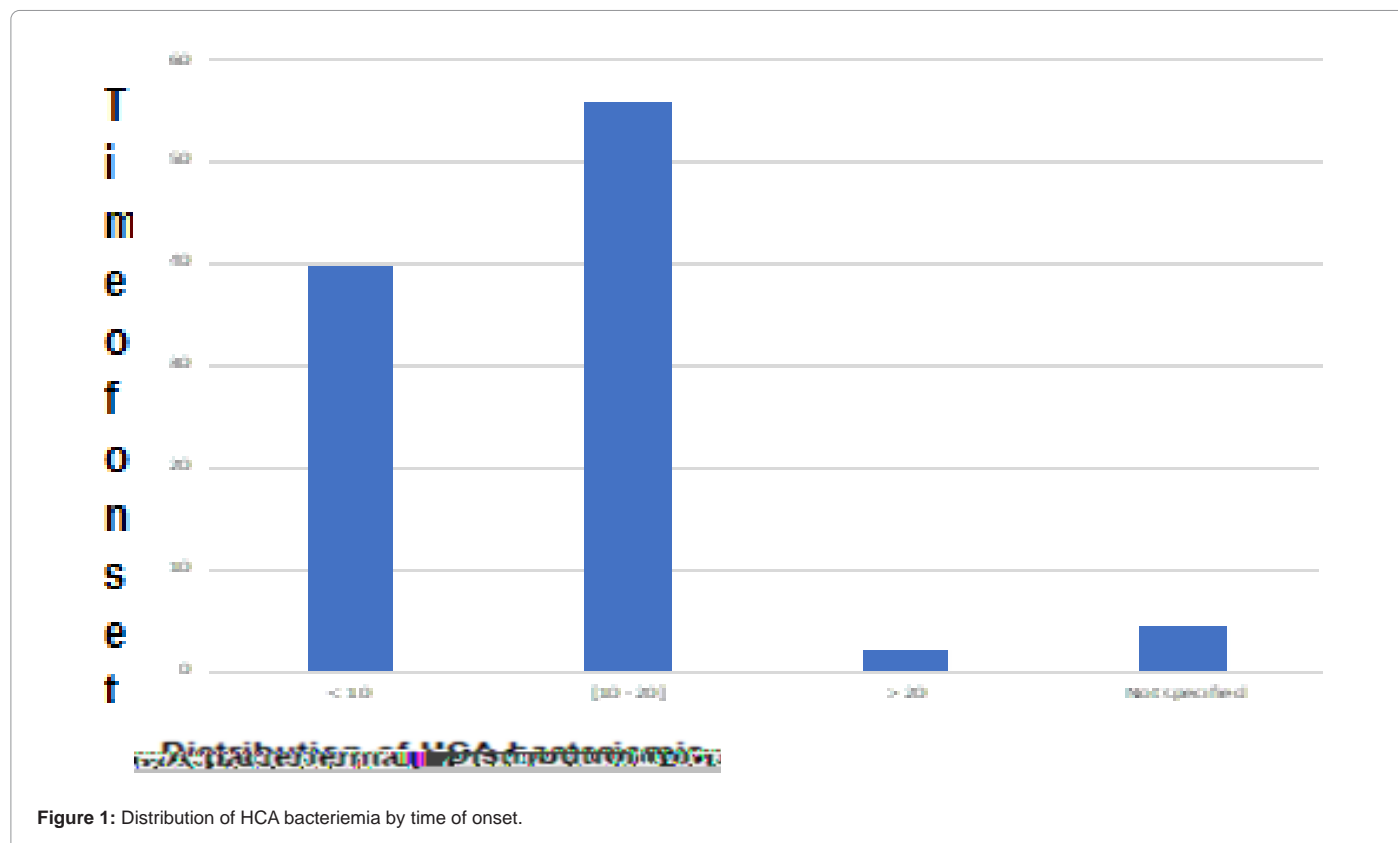
##### Clinical aspects

A recent previous hospitalization had been noted in 33% of cases and its duration was less than 10 days in 53.9% of cases, with a mean of 13 days  $\pm$  10.3 (1;35). Of the patients with a previous hospitalization, 94% were hospitalized in the medical department and the reasons were diverse and varied (headache, fever, gastroenteritis). The majority of patients (61.5%) had been on antibiotics before their current hospitalization. Amoxicillin-clavulanic acid (20%), Ceftriaxone (16%), Ciprofloxacin (9%), Cotrimoxazole and Metronidazole (7% each) were the most used molecules (Table 2).

Variables		

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Marital status		
- Married		



Reason for current hospitalization	Number	Percentage
Tuberculosis	17	30.9
Other pulmonary infections	5	9.1
Meningitis and/or encephalitis	5	9.1
Severe malaria	3	5.5
Others	22	45.5
Exposure factors		
Venous catheters	52	100
Urinary catheter	45	87
Nasogastric tube	26	50
Bed sores	4	8

Table 3: Distribution of patients according clinical aspects.




high rate could be explained by the recurrent use of gastric tubes for the diagnosis of pulmonary tuberculosis, in addition to its classical use, i.e. parenteral nutrition, in case the patient's condition required it. The different time period of catheterization which could also be factors favoring bacteremia, were not recorded in our study; the risk of infection increases with a time of period of more than 72 hours [25].

The mean white blood cell count was  $11521.92 \pm 10079.6/ \text{mm}^3$  (2200-56280); C-reactive protein was measured in 50 patients, with a

