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CATHETER RELATED BLOOD STREAM INFECTIONS IN SEVERE BURN PATIENTS. CLINICAL DATA FROM AN ORIENTATED SURVEILLANCE IN THE ICU OF THE SERVICE OF BURNS, ALBANIA

Monika BELBA

Hospital University Center "Mother Teresa", Service of Plastic Surgery

Abstract

Nosocomial infections (NI) are defined as infections acquired in the hospital by a patient who is hospitalized for another reason than infection Many types of NI can be present in the burned patient but more frequent are the burn wound infections and bloodstream infections (BSI).

The purpose of this study is to identify the incidence of Blood Stream Infections (BSI) and specifically CRBSI (Catheter Related Blood Stream Infections). Also to give data on the incidence of Catheter tip colonization (CTC) for Central Venous Catheter (CVC), and if there are statistical links between them.

The study is prospective, clinical and analytical. We have done appropriate calculations for BSI, CRBSI and CTC. CTC and CRBSI were analyzed for the possibility of linear correlation. The p values <0.05 (5%) were considered significant.

The incidence of BSI is 11.5% or 5,5 BSI for 1000 days hospitalization. The incidence of CRBSI was 11,7 BSI for 1000 catheter days. CTC was 15.6 for 1000 catheter days. By linear regression analysis between the CTC and CRBSI has resulted a strong linear correlation (r = 0.76, r = 0.56; incidence of CRBSI =0.62 +0.22 x incidence of CTC).

We think that positive identification of CTC serves as the endpoint for CRBSI. In this fact may also have an impact the femoral vein catheterization for placement of central venous catheter and also emerges as a necessity the implementation of asepsis rules during manipulations not only in the wound but especially during the central venous catheter placement.

Key words: nosocomial infections, bloodstream infections, burns

Introduction

Nosocomial infections (NI) are defined as infections acquired in the hospital by a patient who is hospitalized for another reason than infection. These infections occur worldwide and affect both developed and developing countries [1,2].

When defined as a nosocomial infection, its specific type needs to be determined according to Center for Disease Control (CDC) [3]. The American Burn Association (ABA), have developed and published standardized definitions for sepsis and infection-related diagnoses in the burn population [4].

Many types of NI can be present in the burned patient but more frequent are the burn wound infections and bloodstream infections (BSI). The implementation of ABA criteria helps to unify the terminology used to conduct the surveillance valid not only for the hospital service but also to make comparisons with advanced services that address the same problem.

The purpose of this study is to identify the incidence of BSI in the Intensive Care Unit (ICU) of the Service of Burns and Plastic Surgery in University Hospital Center (UHC) in Tirana, Albania.

The specific objectives of this study are:

- To give data on the BSI.
- To give data on Catheter Related Blood Stream Infections (CRBSI).
- To define the incidence of Catheter Tip Colonization (CTC) for Central Venous Catheter (CVC), and if there are statistical links between them.
- To identify risk factors for NI in general.

Materials and methods

Study type

The study is prospective, clinical and analytical. The study is continued / longitudinal because monitors all patients with severe burns during a specified time period 1 year (2010-2011). Patients are followed throughout the period of hospitalization in intensive care. This study is part of an orientated surveillance in the ICU of the service of burns that is considered as a unit with a