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Emergence of *Staphylococcus hominis* Strains in General Infections

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ABSTRACT:

A retrospective analysis of microbiology data from general infections was performed. From 105 isolates strains of *Staphylococcus* spp. 36 (34,28%) were *Staphylococcus epidermidis*, 33 (31,42%) *Staphylococcus aureus*, 21 (20%) *Staphylococcus haemolyticus*, and 15 (14,28%) were *Staphylococcus hominis*. Results: *S. hominis* isolates were predominantly resistant to betalactamins (93,33 %) and even Imidazole (60 %). 53,33 % of strains were resistant to aminosides and 33,33 % to Ciprofloxacin. All strains (100%) were sensitive to Vancomycin, but also all were susceptible to Quinupristin-Dalfopristin. A high percentage of *S. hominis* were sensitive to Moxifloxacin, Linezolid (93,33 %), and to teicoplanin (86,67%). Discussion: *S. hominis* is a member of skin normal flora, but all strains of *S. hominis* were isolated from generalized infection with a high rate of mortality.

Key words: *Staphylococcus* spp., *Staphylococcus hominis*, susceptibility, general infections.

Introduction

Staphylococcus hominis (*S. hominis*) is a coagulase-negative member of the genus *Staphylococcus*. It occurs very commonly as a harmless commensal on human and animal skin. However, like many other coagulase-negative staphylococci, *S. hominis* may occasionally cause infection in patients whose immune systems are compromised.

S. hominis tends to colonize in areas with numerous apocrine glands, such as axillae and the pubic region. In a certain study, *S. hominis* was calculated to account for 22% of the total staphylococci species recovered from individuals, second to *S. epidermidis* at 46%. Most strains colonize on the skin for relatively short periods of time compared to other *Staphylococcus* species. Unlike *S. epidermidis*, *S. hominis* produces acid from trehalose, so the two tests together serve to identify the species [2].

There are cases of adult patients with sepsis caused by *S. hominis*. In literature mortality is written by 30% [4].

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Materials and methods.

This study determined Staphylococcus strains from hemocultures in general infections (Table I).

Table I Departments of hospital

Department	No of samples
Surgery	3
Internal medicine	6
Intensive care	1
Pediatric intensive care	3
Pediatrics	2

METHOD:

From January until July, 105 strains of Staphylococcus were isolated from hemocultures. Samples were collected and processed using standard microbiological protocols. The isolated strains were identified on device Vitek2 (Figure 1) on ID-GP identification cards and the sensitivity test was performed on AST-P554 cards.



Figure 1 Vitek 2 system

Results.

From 105 isolates strains of Staphylococcus spp. 36 (34,28%) were Staphylococcus epidermidis, 33 (31,42%) Staphylococcus aureus, 21 (20%) Staphylococcus haemolyticus, and 15 (14,28%) were Staphylococcus hominis (Figure 2).

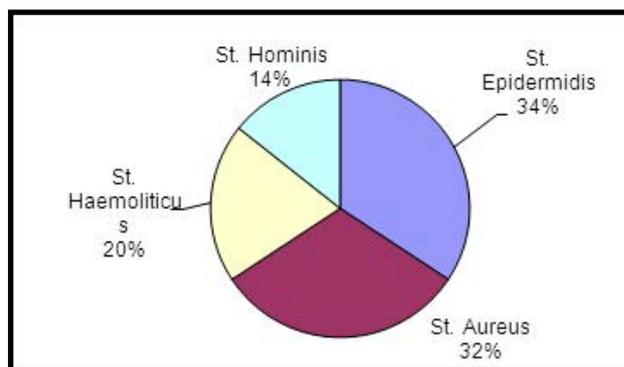


Figure 2 Percentage of Staphylococcus spp.

All isolates were from the hemoculture.

S. hominis isolates were predominantly resistant to betalactamins (93,33 %) and even Imidazole (60 %). 53,33 % of strains were resistant to aminosides and 33,33 % to Ciprofloxacin. All strains (100%) were sensitive to Vancomycin, but also all were susceptible to Quinupristin-Dalfopristin. A high percentage of S. hominis were sensitive to Moxifloxacin, Linezolid (93,33 %), and to Teicoplanin (86,67%).

Discussion.

Staphylococcus hominis is a member of skin normal flora, but all strains of S. hominis were isolated from generalized infection. S. hominis infection frequency was appropriate literature data [5]. Results showed an increased resistance

to bezilpeniciline, Imipenem, or Ciprofloxacin aminozide, and an increased number of Vancomycin, Quinupristin-Dalfopristin, Moxifloxacin, Linezolid and Teicoplanin - susceptible strains.

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