Resistance to antibiotics of *Staphylococcus* strains isolated from hospitalized patients

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Background: Methicillin resistant *S. aureus* (MRSA) is responsible for hospital (HA-MRSA) and community-acquired infections (CA-MRSA). MRSA strains were identified after the introduction of methicillin in therapy. The purpose was to evaluate the antibiotic resistance phenotypes of CoNS strains isolated from hospitalized patients.

Materials & Methods: The study included strains isolated from hospitalized patients in the Emergency Hospital Prof. Dr. O Fodor Cluj-Napoca. The identification and the antibiotic resistance profiles of the strains were performed by standard and automated methods (ApiStaph galery and Vitek2Compact).

Results: Of all isolates, 37.5% were CoNS: *S. epidermidis* (20.8%), *S. intermedius* (4.2%), *S. capitis* (2.1%), *S. hominis* (2.1%), *S. haemoliticus* (4.2%), *S. saprophyticus* (2.1%) and other CNS (2.1%). From all the CNS strains, 26 strains (27.18%) showed Meticiline resistance (MR). The CNS strains showed high rates resistance to Penicillin (25%), to Erythromycin (22.9%), to Imipenem (16.7%), to Rifampycin (10.41%) and to Fosfomycin (29.16%). The CNS strains resistant to Meticiline were: *S. Epidermidis* (20.8%), *S. Intermedius* (4.2%), *S. Haemoliticus* (4.2%), *S. saprophyticus* (2.1%) and other SCN (21%). The MR CNS strains were resistant to Eritromycin (14.6%), Clindamycin (14.6%), Ciprofloxacin (16.7%), Gentamycin (16.7%), Rifampycin (14.6%), Tetracyclin (25%) and Imipenem (22.9%). The resistance to Moxifloxacin was 10.41%. All strains were susceptible to Teicoplanin and Vancomycin.

Conclusion: Following the strains antibiotics resistance profile, we conclude to the circulation in our geographic area of strains with different resistance phenotypes. This finding indicates the necessity to detect them by PCR, for limiting the spread of these strains in hospitals and community.

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