Trabalhos Científicos

Título: Methicillin-Resistant Staphylococcus Aureus Carrying Panton-Valentine Leukocidin Causing An Abdominal-Wall Abscess Followed By A Facial Cellulitis In An Infant Patient

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Resumo: Background: Staphylococcus aureus isolates are related to a wide range of infections and the presence of Panton-Valentine leukocidin (PVL) may contribute to the infection severity. S. aureus PVL positive isolates are recognized to cause severe skin and soft tissue infections, such as cellulitis and abscess, and may present the mecA gene, which confers resistance to b-lactams antimicrobials (except for Ceftaroline). Sub-minimum inhibitory concentrations (sub-MICs) of b-lactams can modulate the expression of this virulence factor, increasing its production, leading to a poor outcome. In this study, we report a case of facial cellulitis followed by an abdominal-wall abscess caused by a Methicillin-resistant S. aureus (MRSA) PVL- positive isolate in a nine month infant, admitted to Hospital Universitário Antônio Pedro (HUAP). Case report: A previously 9-months-old infant was admitted to the HUAP at June 27th with facial cellulitis, being empirically treated with intravenous oxacillin for 13 days. At July 15th the infant presented an abdominal-wall abscess, showing elevated fever. At this same day, the drainage of the abscess was realized ad it was possible to recovered a MRSA isolate in blood agar, identified by the automated system BD Phoenix™, with MIC > 2 mg/mL for oxacillin. Moreover, as part of the surveillance program of Hospital Infection Control Committee, a nasal swab was collected and smeared at the MRSA ChromAgar (Plastlabor). After 24h of incubation, a MRSA isolate was also recovered, however, presenting resistance to the cefoxitin and sulfamethoxazole trimethoprim by the disk diffusion method. In order to detect the presence of PVL genes, a PCR was conducted, indicating that both MRSA isolates were positive for this virulence factor. After the detection of MRSA pvl positive from the abscess-wall drainage, the antimicrobial therapy was change for vancomycin, as the isolate presented a MIC of 1 mg/mL for this drug. However, due to difficulty of venous access of the infant, the vancomycin was replaced by sulfamethoxazole-trimethoprim. The patient was discharged in good clinical condition on July 25th. Conclusion: Recent studies have shown that younger age (< 1 year old) and MRSA nasal colonization are two statistically significant risk factors for developing an MRSA abscess of the head and neck. Moreover, sub-MICs of b-lactams, such as oxacillin, could increase the production of pvl, leading to a severe presentation of skin and soft tissue infections. This report highlights the importance of a prompt diagnosis and appropriate medical and/or surgical management of skin and soft tissue infections caused by MRSA isolates harboring the PVL genes. Moreover, indicates the importance of surveillance programs that can detect not only MRSA colonization, as well as the presence of PVL genes, in order prevent the development of severe infections, such as the presented.