**Staphylococcus Aureus infections in psoriasis plaques**

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**Introduction:** Psoriasis is an inflammatory condition of the skin, of which chronic plaque psoriasis is the most common form (1). Psoriasis is associated with alteration in the composition of skin bacterial biota (2). Staphylococcus aureus (3), group A Streptococcus and Streptococcus pyogenes are involved in psoriasis pathogenesis in genetically predisposed individuals (2,4-6). S. aureus colonization of lesional skin was associated with a significantly higher PASI (Psoriasis Area Severity Index) score, even more evident when isolated strains were toxigenic (5,7).

**Methodology:** This study aimed to investigate the prevalence of infections with pathogenic bacteria in psoriasis plaques. For this purpose, randomly selected patients with plaque psoriasis were tested for bacterial infections in skin lesions using conventional microbiological methods.

**Results:** S. aureus was cultivated in 75 of the 205 samples (36.6%), while methicillin-resistant S. aureus (MRSA) was identified in 45 of 205 samples (21.9%). Other Gram–positive and Gram–negative cocci and bacilli were cultivated from psoriasis plaques: Staphylococcus spp. (representing coagulase negative staphylococci – S.Co.N.) in 122 samples (59.5%), Bacillus/Paenibacillus spp. in 58 samples (28.3%), Streptococcus spp. in 25 samples (12.2%), Enterobacteriaceae in 19 samples (9.3%) (of which Klebsiella spp. was present in 4 samples, Enterococcus spp. in 3 samples, and Escherichia coli in 2 samples, representing 2%, 1.5% and 1%, respectively), Enterococcus spp. in 14 samples (6.8%), non-fermenting bacteria in 14 samples (6.8%) (including Pseudomonas aeruginosa which was cultivated in 2 samples, 1% respectively), and Corynebacterium spp. in 7 samples (3.4%).

**Conclusion:** Gram-positive bacteria were the most frequently found bacteria in psoriasis plaques. Of them, S. aureus was the most prevalent, represented especially by MRSA strains. This study is intended as a warning about the necessity of evaluating bacterial infections in psoriasis plaques, in order to clarify the connection between skin infection and onset or worsening of psoriasis pathology.
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Biography

Violeta Ionescu obtained DVM and PhD degrees in Veterinary Medicine from the University of Agronomic Sciences and Veterinary Medicine in Bucharest, Romania. Her focus and publications during doctoral studies targeted veterinary parasitology. Due to her interest in the One Health concept, she joined the group of Romanian scientists at Activeimmunity, Bucharest led by company president, Dr. Ionel Victor Patrascu, a well-known specialist in virology and vaccinology, that develop alternative immunological approaches for infections with antimicrobial resistance (AMR) microorganisms in humans. Her work also targets novel immunomodulatory approaches in psoriasis.

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