



S29 - PAEDIATRIC DERMATOLOGY

S29.1 - News in bacterial infections

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Introduction: Although the skin is effective in providing protection against infections, cutaneous bacterial diseases are nevertheless a common presentation. These infections are often the result of an accidental break in the integrity of the skin but, sometimes, they are due to a more subtle cause as the demonstration of decreased production of antimicrobial peptides.

Methods: The recent scientific literature has been reviewed and compared with the author's experience in the last 20 years.

Results: In human skin naturally occurring antibiotics like RNase 7 are expressed constitutively and can be found at high levels in the upper layers of healthy epidermis. Others like the human beta defensins (HBD) 2 and 3 require induction to be present in relevant concentrations. Some findings indicate that a 30% lower level of mRNA coding for RNase 7 corresponds to an approximate twofold increase in risk of staph. disease. Recently lower induction of HBD-3, but not HBD-2, was associated with more severe *S. aureus* skin infection. This suggests that inducibility of HBD-3 influences the severity of gram+ skin infection in vivo. The function of HBD-2 remains unclear. The role of stress and Vit. D have also recently studied. Stress mobilizes elements from the neuroendocrine system to modulate immune responses; new findings indicate a mechanism for the negative regulation of host-innate AMP response to infection through cholinergic activation. Vit. D, has a pivotal role in maintaining optimal health and reducing the risk of chronic and infectious diseases. While serum 25-hydroxyvitamin D [25(OH)D] levels for optimal health are in the range of 40-60ng/mL, mean population values in some North European countries are around 20-25ng/mL.

Conclusions: The treatment of pyodermas is complex and the choice of the best and most appropriate treatment strategy is difficult. This arises largely from lack of evidence.