Título:

BACTERIAL AND FUNGAL ISOLATION FROM HUMAN SKIN ALLOGRAFTS SAMPLES

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Human skin allografts have been efficiently used in the treatment of several skin lesions, being indicated for the temporary covering of burns and chronic wounds. For skin grafting, the tissue must be free from bacteria and fungi. However, the descards of skin grafts due to microbial contamination, even after antimicrobial treatment, still an important problem in the skin banks. This study aimed to perform the bacterial and fungal isolation from 22 human skin allografts samples already discarded due to microbial contamination in the Banco de Tecidos - Pele Dr. Roberto Corrêa Chem from the Hospital Complex Santa Casa de Misericórdia de Porto Alegre, for later studies in standardization of an antimicrobial treatment to eliminate these microorganisms from the skin grafts. For microbiological assessment, one square centimeter of the skin graft fragments were inoculated in tryptone soya broth for aerobic bacteria and thioglycollate broth for microaerophile bacteria (both incubated at 37°C for 7 days) and sabouraud dextrose broth for fungi (at room temperature for 7 days). From tryptone soya and thioglycollate broths, an aliquot was inoculated in Blood Agar, Mannitol Salt Agar, Mac Conkey Agar and Eosin Methylene Blue Agar (incubated at 37°C for 24h) in duplicate. Gram stain was performed fromthe bacterial colonies grown and the tube coagulase test was done to differentiate *Staphylococcus aureus* from Coagulase Negative *Staphylococcus* grown in Mannitol Salt Agar. From sabouraud dextrose broth, an aliquot was inoculated in Sabouraud Dextrose Agar (incubated at room temperature and at 37°C up to 7 days) in duplicate. Among the 22 skin allografts, four (18%) samples showed the presence of *Staphylococcus* coagulase positive, four (18%) Coagulase Negative *Staphylococcus* and nine (40,9%) showed Gram positive bacilli. Nine (40,9%) skin allografts samples showed fungal growth. The next steps will be to identify by biochemical and molecular tests all bacteria and fungi isolated and for filamentous fungi to submit them to microcultive for micromorphology analysis and to determine the susceptibility profile to antimicrobial of the isolates to better understand skin allograft microbiology in order to standardize a more effective antimicrobial treatment which enables the use of the tissues for grafting safely and possibly to reduce discard rates.

Palavras-chave: skin allografts microbiology, skin bank, skin allografts contamination.

Agência de fomento: CAPES