CASE REPORT - DECISION MAKING IN APPLICATION OF CEA (CULTURED EPITHELIAL AUTOGRFTS) IN TREATING A 80% TBSA BURNED PATIENT (P085)

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Introduction: We would like to present operative and intensive care treatment of a 23-year-old who set himself on fire sustaining second b- and third-degree burns affecting 80% TBSA.

Family history confirmed suspicions of preexisting psychiatric problems - psychosis.

Methods: The patient was treated in the ICU for 5 months during which twenty surgical procedures were performed. These include tracheotomy, necrectomies, meshgrafting 1:1.5, micrografting 1:4, and application of CEA. The dressing was changed on a daily basis under sedation and analgesia. At least once a week partial necrectomies were carried out by which layers of necrotic tissue, that could not have been grafted due to limited donor sites, were removed.

Most problems and life threatening episodes were caused by multiresistant pathogens such as MRSA, Pseudomonas ae, Acinobacter baumanii, Klebsela pneumoniae ESBL, Enterobacter cloacae VIN, and Candida albicans. All required laboratory tests including alveolar aspirates, swabs, hemo- and-urine cultures being done. Patient was being monitored Picco and connected to the mechanical ventilation. A multidisciplinary team of surgeon, anaesthesiologist-intensivist, internist, psychiatrist, urologist, neurologist and microbiologist were involved. Physiotherapy was also performed every day. It was not possible to use Integra due to the presence of pathogens that had colonized all inflicted areas threatening the development of serious septic episodes that might have become fatal.

Cultured keratinocytes were applied over the whole back surface, and after the first five days covered with hydrofiber dressing enriched with nanosilver (Aquacel Burn). The area was prepared prior to the application by performing several partial necrectomies waiting for keratinocytes to be cultivated. The patient was put in prone position and after preoperative cleaning the necrectomy was done and CEA was applied. All joint surfaces were excluded so that physiotherapy could go ahead but lying on the back did not disturb ingrowths.

Results: The patient survived and left hospital after almost 7 months, able to stand and walk using a walker. Complications - contractures of hand joints despite not being affected at all occurred because the patient was uncooperative. After completed treatment the patient was transferred to the psychiatric ward.

Conclusion: Application of cultured kerationocytes is very demanding and expensive procedure. Every failure would have jeopardised the patient's life and made situation worse. After two applications of CEA, they have to be kept in situ at least for 5 days, which prevents us from cleaning areas covered with cells.