

Ca 7 - Sterilization of skin allografts by <sup>60</sup>Co radiation

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Tissue Banks aim to provide effective and safe tissues, but despite careful donor selection and aseptic technique, bacterial and viral contamination remains a threat. Some pathogens can be eliminated through additional sterilization processes, among which, ionizing radiation sterilization represents a safe technology and a sterilization process where tissue is not damaged by increase in temperatures or chemical residues left behind. Interested in studying the effects of complementary radiation sterilization on human skin preserved in 85% glycerol preserved, the authors describe their results concerning the changes in histology and biomechanical properties of allografts (0.15 mm thickness), irradiated at a dose of 25 kGy at the Instituto de Pesquisas Energéticas e Nucleares / Comissão Nacional de Energia Atomica - IPEN/CNEN in São Paulo, Brazil. Biomechanical Strain testing of control and irradiated samples were performed at the IPEN using na Instron Universal Machine. The results indicated the maintenance of structural and biomechanical characteristics in 0.15mm thick human skin fragments preserved in 85% glycerol and radiation sterilized. In view of these results, The University of Sao Paulo - Hospital das Clinicas/IPEN Tissue Bank has included radiation sterilization as a complementary step of skin processes in all cases of contamination by gram + bacteria, with good clinical outcomes. Topic of Interest: Infection.

Ca 8 - Neonatal hyperthyroidism programs for lower thyroid radioiodine and hypothyroxinemia in adult rat.

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Evaluate the effects of thyroxine treatment during lactation upon the thyroid function in the adulthood, to test the hypothesis of neonatal programming of this function. Wistar rats were treated with thyroxine (50mg/100g body weight, i.p.) or saline during the first 10 days of lactation. Body weight gain, nose-to-tail length, and food intake were monitored every four days, from parturition to 60 days of life. At the end of the experiment, the animals received <sup>125</sup>I (20 mCi/ml, i.p.) and were sacrificed two hours later. Thyroid <sup>125</sup>I uptake were determined in a Counter gamma. Serum T<sub>4</sub> and TSH concentrations were determined by rat specific radioimmunoassay. Compared to controls, thyroxine-treated rats presented lower thyroid weight (15.3 ± 0.74 X 18.5 ± 0.73 mg) thyroid <sup>125</sup>I uptake (0.168 ± 0.007 X 0.244 ± 0.015 %/mg thyroid tissue), serum T<sub>3</sub> (43.8 ± 3.53 X 56.6 ± 3.88 ng/dl), T<sub>4</sub> (2.31 ± 1.11 X 3.43 ± 0.150 µg/dl) and TSH (1.63 ± 0.08 X 2.54 ± 0.16 ng/dl) concentrations. Those animals showed also a lower food intake, body weight and nose-to-tail length during all the period of study. Thyroxine treatment during lactation programs thyroid function and body composition to a lower level. Nuclear medicine exams could take in account the thyroidal functional status during the neonatal period. CNPq, FAPERJ, SR2-UERJ.

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