

REGARDING CORNEAL PREPARATION IN THE HUMAN TISSUE BANK OF THE REPUBLIC OF MOLDOVA, DURING 11 YEARS OF ACTIVITY

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Introduction. The cornea is the tissue of the human eye that improves the quality of the image formed on the retina. The quality of corneal tissue can be influenced by several factors inherent to the recipient, the donor, the donation and transplantation process. Donated corneal tissue can be classified according to its quality as for transplantation with optical and tectonic purposes evaluated macro and microscopically. The corneal quality classification, assigned by the Human Tissue Bank following the assessments, took into account 13 criteria: senile arcade, scars, epithelial defect, epithelial exposure, stromal infiltrate, subepithelial opacity, pterygium, Descemet folds, stromal edema, stromal reflex, stromal, stromal and gutstrial reflex. cell loss. The ophthalmological criteria used were chosen by the Pan American Association of Eye Banks, the Association of American and European Eye Banks. Purpose of the work. The study conducted presents the challenges in evaluating the sampling, processing and validation of corneas in the Human Tissue and Cell Bank for the 12-year period 2013 - 2024 on 470 corneas.

Material and Methods. We examined 264 donors (69.8% male, 30.2% female), with a mean donor age of 59.4 years (SD 18.3 years) and between 18 and 91 years. Donors were from forensic medicine (23.5%), public hospitals (67.6%), and multi-organ donors (7.1%). The most common causes of donor deaths were cardiovascular disease, trauma, and cerebrovascular disease.

Results. Corneal failure was in 25.4% of cases, of which serological infections (HBsAg-positive, HCV-positive, HIV/AIDS) - 15%, and biological contamination occurred in 6.8% of all donor corneas and 1% cases with hemolysis. In total (470 corneas), 74.6% of the processed corneal tissue was used for optical corneal transplantation (74.8% for penetrating keratoplasty, 2.1% for lamellar keratoplasty and 1.3% for unspecified transplants) and 25.4% (101 corneas) were destroyed as waste.

Conclusion. The best quality of the cornea is that taken up to 10 hours that defined the endothelial cell density being 2800 cells / mm², with moderate signs of polymegetism, cellular pleomorphism, being considered as indications for transfixing keratoplasty with optical purpose.

Keywords: transfixing keratoplasty, polymegetism, cellular pleomorphism.