THIRTEEN YEARS OF ACTIVITY OF THE HUMAN TISSUE BANK AT THE CLINICAL HOSPITAL OF ORTHOPEDICS AND TRAUMATOLOGY

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Introduction. Tissue transplantation represents an essential component of modern regenerative and reconstructive medicine. In the Republic of Moldova, this field has evolved progressively since the 1960s, beginning with the use of bone grafts and culminating in the establishment of a national infrastructure for tissue banking. The creation of the Human Tissue and Cell Bank (HTCB) in 2011 marked a pivotal advancement, enabling the systematic collection, processing, preservation, and distribution of human tissues and cells.
Materials and Methods. This study presents a descriptive and historical review of the development and activity of tissue banking in Moldova, with a focus on the 13-year operational period of the HTCB within the Clinical Hospital of Traumatology and Orthopedics. Data were collected from institutional records, historical documents, and reported clinical milestones, emphasizing infrastructure development, leadership, and clinical implementation of tissue transplantation.
Results. The origins of tissue transplantation in Moldova date back to 1962 with the establishment of the Tissue Preservation Laboratory, initially within the Republican Blood Transfusion Station and later relocated to the Clinical Hospital of Traumatology and Orthopedics. Under successive leadership, the laboratory contributed significantly to graft preservation and clinical application. A major milestone was achieved in 2011 with the establishment of the HTCB under the coordination of Professor Viorel Nacu. The bank was structured to include specialized units for reception, processing, clean-room operations, storage, and distribution. Since its inauguration in 2013, the HTCB has successfully implemented multiple transplantation procedures, including the first allogeneic corneal harvesting and transplantation, as well as skin harvesting and grafting procedures. The bank supports a wide range of tissues, including skeletal grafts, corneas, skin, amniotic membranes, and autologous bone marrow-derived cells.
Conclusions. Over thirteen years of activity, the Human Tissue and Cell Bank has become a cornerstone of Moldova's healthcare system, significantly contributing to the advancement of transplantation medicine. Continued development requires sustained investment, adherence to international standards, and integration with European regulatory frameworks to ensure quality, safety, and future expansion.
Keywords. tissue transplantation, human tissue bank, Moldova, graft preservation, regenerative medicine, HTCB