DISPOSAL OF CPH BAGS: CHALLENGES, STANDARDS AND SUSTAINABILITY

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INTRODUCTION:

The Cell Processing Center (CPC) of a blood center in the Northeast is responsible for the processing, cryopreservation and storage of bags containing Hematopoietic Progenitor Cells (HPC), destined for bone marrow transplantation from 5 transplant centers, four private and one public. All the HPC bags are stored in a -80°C freezer until the time of the transplant. However, in certain situations, it becomes necessary to dispose of these bags, whether due to loss of indication for transplantation, death of the recipient, positive blood culture, clinical decision by the doctor in charge of the transplant center, long storage period or optimization of storage spaces. Disposal of this material is based on the technical instructions that describe the process for disposing of CPH bags, showing compliance with technical and legal requirements. AIM: To report on the experience of disposing of cryopreserved CPH bags as a storage optimization strategy in a Cell Processing Center.

MATERIALS AND METHODS:

Retrospective qualitative and quantitative analysis of the disposal process. The CPH bags were discarded according to criteria pre-established by the CPC: Non-compliance with quality control laboratory tests; Death of the patient; Surplus material not used in transplants; Refusal or discontinuation of treatment for the recipient patient. Discarded bags were recorded on disposal forms, previously signed by the applicant and the technical team responsible for the process, guaranteeing traceability and technical justification. Finally, they were sent to the solid waste sector for incineration, which certifies that the service was carried out.

RESULTS:

A total of 449 CPH bags were discarded between June 2022 and April 2025, from 164 patients, 111 (67.7%) autologous and 53 (32.3%) allogeneic. Of these, 341 (76%) bags were discarded due to cryopreservation time, 99 (22%) bags were discarded due to death, 7 (1.56%) bags were discarded due to a positive blood culture from the same patient and 2 (0.44%) bags were discarded due to a request from the transplant center.

CONCLUSION:

The process was carried out safely, respecting current legislation, the institution's protocols and good practice in the disposal of biological material. The entire process was carried out while maintaining traceability between the sectors involved, and the institutional commitment to patient and staff safety. As of March 2024, patients signed the new Informed Consent Form, which states that products stored for more than three years will be automatically disposed of, except in cases where there is a formal request from the transplant center to extend the deadline

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