

Session 2.1

Tissue Grafting for Human Health: Case of Peru

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The Challenge



- Each year 15 000 children require medical treatment for burns due to accidents.
- The Health Children National Institute (INSN) receives 3000 patients per year.
- About 400 infants, out of 800 remaining hospitalized in the INSN, need surgical procedures.
- In the last 10 years, a few workers got injured by radiation when using industrial gamma radiography. They were treated with stem cells in France and Brazil



National Effort

- 1995 - IPEN and the National Institute for the Children's Health (INSN) started a joint effort to promote a Tissue Bank.
- 2013 - the First National Tissue Bank in Peru starts at the INSN, with the production of lyophilized amniotic membrane, pig skin and bone allografts.
- Stakeholders:
 - Ministry of Health
 - Health Children National Institute
 - IPEN
 - National Organization for Donation and Transplant
- 2014 - Several new techniques were introduced in the concept of Tissue Banks in Peru, mesenchymal stem cell culture and skin culture are the most promising



IAEA Support

- Raising awareness of the relevance of tissue grafts and the need for human capacity building
- Capacity building for lab infrastructure which enabled the introduction of tissue engineering methods for regenerative medicine: mesenchymal stem cells, artificial skin and irradiated tissues grafts.
- Support for the introduction of quality assurance in the procedures for the radio-sterilization of tissues
- Support for Consolidating Tissue Banks in Latin America and Radiation Sterilization of Tissue Allografts, as well as a network for Tissue Banks in the region
- Capacity building in radio-sterilization of biological tissues



Results

- Very positive outcomes in patient recovery
- All steps for tissue grafting identified (tissue procurement, tissue or cell treatment, distribution and grafting).
- Steps started for:
 - Implementation of tracking and quality systems
 - Implementation of the regulatory structure for tissue grafting, with the National Organization for Tissue Donation (ONDT).
- Today more than 20 injured or burn children are treated at the INSN
- Our Target: *Sustainable Development Goal 3*

