Acta Scientific ANATOMY

Volume 2 Issue 2 March 2023

Editorial

Anatomical Preparations for Splanchnology

Marcus Alexandre Mendes Luz*

Department of Human Anatomy, Faculty of Medicine, Union of Great Lakes Colleges, Unilago and Department of Structural and Functional Biology, Campinas State University, Unicamp, Brazil

***Corresponding Author:** Marcus Alexandre Mendes Luz, Ph.D., Professor of Human Anatomy, Department of Human Anatomy, Faculty of Medicine, Union of Great Lakes Colleges, Unilago and Department of Structural and Functional Biology, Campinas State University, Unicamp, Brazil.

Received: December 09, 2022

Published: February 01, 2023

The study of anatomy in cadavers presupposes the use of appropriate conservation techniques that prevent putrefaction and guarantee the preservation of delicate structures such as blood vessels, glands and organs of the nervous system. Traditionally, these techniques include the use of formalin solution at concentrations of 4% and 10%, [1] as well as the use of more complex techniques such as the Kaiserling Method [2] or the use of glycerin, according to Le Prieur's, Laskowski's and Giacomini's protocols [3].

However, the different characteristics of organs and tissues allow the application of a wide variety of techniques for the conservation of anatomical parts, which include injections of dyes and repletion associated with dissection [4,5].

In splanchnology, anatomical techniques are focused on the production of molds in resins and injections for revealing vessels, and the preservation of larger pieces is restricted to immersion in fixative solutions or, more recently, to the plastination technique [6]. As an alternative to conventional splanchnic techniques, simple and efficient protocols can be used in the study of the alimentary canal and adjacent glands, for example.

The paraffinization of dissected organs previously fixed in 10% formaldehyde, dehydrated in ethanol, cleared in xylol and impregnated with paraffin at 56 °C guarantees the perfect preservation of the anatomical characteristics of the selected structures, despite a significant volume retraction. In the study of angiology, the heart, due to its essentially muscular constitution, presents a slight retraction before the described method [7].

Chemical dehydration of unfixed parts using a saturated sucrose solution, treated by repletion and immersion, offers satisfactory results, with minimal shrinkage and discreet color change. This protocol apparently brings better results than the use of saline solution, where retraction and distortion of structures are evident.

A third protocol using preservation by bicyclic terpenoid, includes the inflation of cavitary organs and their progressive diaphanization by terpenoid solvent, ensuring a certain transparency and resistance to the structure. The protocol can be associated with the filling of vessels by dyes, allowing the study of the topography of the organ and its vascularization [7].

Thus, by exploring simple and accessible resources, there is a change of perspective in the conventional study of formolized or glycerinated cadavers, providing new subsidies for the observation of anatomical structures.

The improvement and development of strategies for the preparation of anatomical pieces from the collection of Anatomy Laboratories and didactic Museums are essential for the richness and variety of didactic materials for teaching, anatomical demonstrations as well as research in macroscopic anatomy, preserving the centuries-old tradition of preservation and dissection of the human body for the consolidation of Medical Education.

Bibliography

1. Tompsett DH. "Anatomical Techniques". E.&S. Livingstone LTD, (1956).

2. Gonzales J A M and Charo I L C. "Técnicas de Conservación em Anatomia". Servicios Gráficos S.C.R.L., (1989).

3. Rodrigues H. "Técnicas Anatômicas". Edição do Autor, (2005).

4. Auffret C. "Manuel de Dissections des Regions et des Nerfs". Octave Doin Editeur, (1881).

5. Ancel P. "Précis de Dissection". Octave Doin Editeur, (1906).

6. Sora MC., *et al*. "Plastination-A scientific method for teaching and research". *Anatomia, Histologia, Embryologia* 48 (2019): 526-531.

7. Hildebrand M. "Anatomical Preparations". University of California Press, (1968).