DISSECTION AND PREPARATION OF VISCERA FOR PLASTINATION:
PLASTINATION OF A BOVINE HEART

Josep M Batalla Balagué
may 2015

INTRODUCTION

The descomposition of organic matter is a vital process in nature, but is also an impediment for morphological studies and research. The plastination is an alternative to the conservation of biological tissue or whole bodies or organs.

The plastination is a technical procedure for preserving biological material, created by the artist and physician scientist Gunther von Hagens in Heidelberg, Germany, in 1977. It consists of extracting the fluids of the body using solvents such as acetone and then replace them with plastic resins such as silicone, epoxy resins or polyester. This result in dry, odorless and durable pieces

OBJECTIVES

• Dissect a bovine heart for teaching. The veterinary students can understand perfectly the anatomy of the heart, especially regarding coronary vascularization.
• Learn the plastination conservation technique.

MATERIALS AND METHODS

This work was conducted in the area of Anatomy of the Faculty of Veterinary Medicine at the Universitat Autònoma de Barcelona. We used a bovine heart taken from a slaughterhouse. In the image 1 we can see the heart of cattle before their dissection. We cannot appreciate the coronary vascularization due to the large amount of fat covering the heart. The main coronary arteries and veins were dissectionated and a window was performed in the right ventricle to observe internal structures.

To make plastination we followed the protocol of 5-10 technique :

CONCLUSION

The plastination technique has several advantages compared with classic conservation techniques:

• We have obtained a high quality and durable viscera
• We have preserve the texture, color and structure
• The organ is preserved in dry form without the need to use toxic and irritable conservants
• The plastinated pieces contributes to improve the anatomical investigation and teaching