Histological, immunohistochemical and anthropological study among mummies coming from different geographic areas

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Following the discovery of two partially mummified corps in a Cathedral of Castelsardo, to better understand the mummification process it was decided to compare them with a peruvian mummy given to the University of Sassari in the late ‘800.

The aim of this work is to compare tissue conservation status by a morphological study supported by anthropological analysis.

Samples of skin and muscle were taken and rehydrated in Sadison’s solution to be subjected to histological and immunohistochemical procedures. To establish sex, death-age and height we worked following classical methods (Ferembach 1980; Ubelaker 1989; Meindl and Lovejoy 1985).

Castelsardo’s mummies conditions are generally fair, although very variable in different points of the body: the former is male, with death-age between 45-55 years. His height is 171 cm. The latter female, with death-age between 60-67 years. Her height is 157 cm. She shows reduction of some intersomatic spaces, spondyloarthropathy and scoliosis. The muscular and cutaneous tissues show a good conservation, in particular the former presents a fibrillar structure well-preserved, boundaries free between cells.

The peruvian mummy is male, with death-age older than 25 years. His height is 160 cm. He shows osteophytosis at lumbar area with a collapse of the body at 4th lumbar vertebra; his conditions are overall good however the tissues show a poor conservation where a structural organization cannot be distinguished.

This study allowed us to obtain paleo and microanatomy informations and to describe the morphological characteristics of mummified tissues.

References

Key words
Mummies, anthropology, histology, immunohistochemistry.