



## Pathology Biology Section – 2007

### G4 The Mummified Corpse Found in a Domestic Setting

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After attending this presentation, attendees will gain an understanding of the forensic and ethical issues pertaining to unattended deaths of those with little or no contact with society and the mummified remains found after a significant period of time after death.

This presentation will impact the forensic community and/or humanity by presenting a case of a mummified corpse found several years after death.

Mummification refers to all natural and artificial processes that bring about preservation of the body or its parts. Such processes include primarily the drying of the soft tissues instead of liquefying putrefaction. The essential requirement for mummification is a dry environment, preferably with a moving air current, which is usually in a warm environment. The most widely known form of mummification is in hot and arid areas like Egypt, Chile, and Peru. It is also likely to occur in temperate climates especially when the body is left undisturbed in warm dry place such as closed rooms, closets, and attics.

A mummified body of an 86-year-old white male with a history of coronary atherosclerosis was found in the entryway of his apartment located in a condominium of the city of Bari (Southern Italy) approximately seven years after death. The body was sitting on the carpet in front of an easy chair, clothed in a woolen vest with dark pants and shoes. The head was lying face down on the easy chair and the scalp with long grey hair was still present. The appearances of mummification included desiccation and brittleness of the skin, which was stretched tightly across anatomical prominences such as the cheekbones, chin, costal margin, and hips. The skin and the underlying tissues of the body were darkened, hard, forming a leathery shell over the body and making autopsy dissection difficult. The corpse was well preserved through the mummification process and no external injuries were observed. There was little evidence of insect activity. The shutters of the entry way were closed but the windows were open so that there was accessibility to air. The carpet on which the body was sitting and the upholstery of the easy chair on which the head was lying absorbed most of the early putrefactive fluids. Several empty pupae of *Lucilia sericata* and *Calliphora vicina*, cast larval skins of Dermestidae (Coleoptera) along with dermestid frass (excreta) were found on the floor close to the body suggesting a death occurred during the spring season.

Mummification often occurs in elderly bodies due to rapid dehydration of the outer surface. The rapidity of dehydration may reduce the usual swelling of the body preventing also putrefaction by enteric microorganisms, soil bacteria, and other decay organisms. The rapid drying of soft tissues may also protect the internal organs even from insect colonization as in this case where after the drying had taken place, the corpse remained in that state for many years with no insect activity at all. Larval infestation for all blow fly species is usually hindered by the rapid dehydration of the skin surface; female adults recognize dehydrated and/or mummified skin as inhospitable to the larval stages which need both moisture and accessibility to air. Radiographs of the body disclosed osteoporosis but no fractures or other evidence of blunt trauma. The internal organs were well preserved. However, the cause of death was undetermined. Based on the antemortem data available the remains were rapidly identified by dental comparison. The man had been missing seven years. The neighbors stated they had thought that the man had died a long time ago. Unpaid electricity bills resulted in termination of electrical service. The paid condominium bills forced the manager of the condominium led to the entry of the apartment.

**Mummification, Postmortem Changes, Forensic Taphonomy and Entomology**