

GENERAL INTRODUCTION

The papers of these issues correspond to select manuscripts delivered at the Congress on Mummy Studies, which are summarized as follows. The distinctive features of the Chachapoya Laguna de las Momias site, an area of high humidity in which one would not normally expect postmortem tissue preservation in the montaña of northern Peru, is presented by Dr. Kauffmann-Doig who was the first professionally trained archaeologist to examine these mummies. We are indebted to Ms. Guita Hourani who, almost single-handedly, is calling the world's attention to this a very special mummy collection. Identified in a cave in the mountains east of Beirut, Lebanon by French spelunkers, they have been transported to the National Museum in Lebanon. They appear to be members of the Maronite population, probably from about A.D. 1200. These have a very special value because of historical data available from that period of political instability in that region. We can be happy that they are now sheltered within the facilities of a national institution and hope very much that Lebanese officials will recognize the informational treasure the museum staff is curating and that they will be given appropriate support for both their proper conservation as well as the bioanthropological studies that can help supplement and refine the presently available historical information from that era. We have learned about one newly developed method and two new applications or adaptations of methods to bioanthropological studies. Dr. Appenzeller et al. review the previous studies of neuralgic tissues in mummies and then provided dramatic evidence not only of paleoneuroanatomy but also the isolation of a variety of peripheral nerve proteins and enzymes, thereby opening up an entirely new field of mummy tissue study.

The immunochemical technique for the demonstration and identification of schistosome ova developed by Patricia Rutherford in Dr. Davis's University of Manchester laboratory offers an opportunity for unequivocal identification of these ova that are frequently so deformed when viewed in tissue sections that their histological morphology alone without such immunological identification can only make a presumptive diagnosis. In a similar manner the information about collagen made available by the application of Fourier Transform in Raman Spectroscopy to mummy skin by Dr. Gniadecka is impressive and it

requires little imagination to envisage other useful applications of this technique now that it has been demonstrated effectively in this circumstance. The manuscript by Dr. Gregg is a model for all of us in that he has exploited the opportunity to compare frequencies of specific diseases in a currently living population as well as in the human remains of their direct ancestors about 600 years ago. Most of us yearn to be able to make such comparisons and Gregg's findings confirm its value.

Every science needs to re-examine its paradigms periodically and we welcome Dr. Rothschild's examination of the relationship of iron deficiency and porotic hyperostosis. Certainly the field would benefit from live animal studies to help evaluate the etiology of porotic hyperostosis. Brier's and Zimmerman's report of the paleopathology of the Egyptian Queen Weret, the demonstration of the spiculated periostitis relating to a humeral osteosarcoma and the sophisticated studies of a Peruvian mummy with tuberculosis by Guido Lombardi and Uriel García Cáceres are all examples of how detailed study of a single mummy can made genuine contributions to the field. The Pott's lesion so dramatically demonstrated by Etxeberria et al. is now also a candidate for molecular biology studies. The fascinating constellation of deformities including both congenital lesions (Sprengel's deformity) and acquired (right shoulder dislocation) adds a unique example to the literature of these conditions.

On the other hand, a number of different reports of population and case studies by A. Rosalie David in Egypt, Monica Gustafsson, and Aduino Araújo et al. provide evidence of the value of that traditional approach as well. Similarly the occupational changes in a collection from Punta Teatinos by Quevedo as well as the differences in stress lesions from two different archaic populations in northern Chile studies by María Antonietta Costa et al. also emphasize the importance of this approach. Additionally, Conrado Rodríguez-Martín has emphasized this form of study by reporting findings of his demographic investigations of the already much-studied Guanche group that represent the ancient inhabitants of Tenerife in the Canary Islands. Then, too, while we have a surfeit of literary information about human sacrifice in the New World, we suffer from a dearth of paleopathological evidence. Verano's presentation of the osteological alterations reflecting that activity are therefore invaluable to the field. Rabino Massa's et al. immunological evidence shows that 40% of Egyptian mummies from the Gebelen group had malaria is a startling statistic and invites comparison with other groups in different areas from varying time periods.

Ma. Milagros Macías López presents a case of Sprengel's disease of a five years old mummified girl from Cádiz (A.D.-XIX century); revealed by radiological and cat examination. Douglas H. Ubelaker evaluates the possible causes for the increased morbidity in many areas of the Americas during pre-Columbian epochs. He discusses the idea that temporal shifts in population density and settlement patterns may explain the temporal patterns of morbidity and he compared them with ancient Old World patterns. Conrado Rodríguez-Martín also analyses equinococosis from their osteopathological impact in human skeletal tissue. Katharina Ditmar presents a pioneer study of ectoparasites found in mummified remains of guinea pig from a precolombian site in southern Perú (ca. A.D. 1.100-1400). Ronald S. Wade reports on the "history" of a human anatomical collection formed during the 18th century, which was later incorporated in the School of Medicine of University of Maryland in 1820.

All of us extend our deepest appreciation to the participants in the symposium of paleopathology and their willingness to share these most important findings with us. Our gratitude also extends to Dr. Calogero Santoro and his colleagues from the University of Tarapacá here in Arica for their gracious hospitality, their efforts to provide us with these wonderful facilities and their anticipation of all our needs.

Arthur C. Aufderheide
University of Minnesota, Duluth