



Slot-type fractures of the scapula at New Kingdom Tell El-Amarna, Egypt



Gretchen R. Dabbs^{a,*}, Melissa Zabecki^b

^a Department of Anthropology, Southern Illinois University, 1000 Faner Dr., Mail Code 4502, Carbondale, IL 62901, USA,

^b Parkin Archeological State Park, PO Box 1110, Parkin, AR 72373, USA,

ARTICLE INFO

Article history:

Received 20 March 2015

Received in revised form 17 July 2015

Accepted 28 July 2015

Keywords:

18th Dynasty

Seth

Corporal punishment

Ritual

Differential diagnosis

Sharp force trauma

ABSTRACT

Amarna is the archaeological representation of Akhetaten, the short-lived Egyptian capital city of Akhenaten (reign 1352–1336BCE). Five adult males excavated from the South Tombs Cemetery (STC) (total $n > 400$) at Amarna exhibit slot-type fracture lesions of the scapula, and two of these lesions exhibit evidence of active bone remodeling at the time of death. The lesions in question are described and a full differential diagnosis is considered. The differential diagnosis rules out atrophic perforations, scapular foramina, tumors, and occupational and accidental trauma. Given the location, morphology, and surrounding bony changes, these lesions are consistent with sharp force trauma, specifically stabbing. These lesions most likely represent the consequence of corporal punishment in the form of “strokes” accompanied by “open wounds” known from Egyptian literature for punishment of a wide range of civil and criminal activities. Alternatively, several pigs at Amarna show similar wound morphologies of the cranium and scapulae, which have been interpreted by other authors to represent ritualized punishment of the god Seth, who is often represented as a pig. The lesions described here are consistent in morphology and positioning with the swine examples, and may represent further, cross-species, evidence of ritualized punishment at the ancient capital city.

© 2015 Elsevier Inc. All rights reserved.

1. Introduction

Akhenaten, the “heretic king” of ancient Egypt ruled for 16 years (1352–1336BCE) during the 18th Dynasty of the New Kingdom (Kemp, 2006). During his reign, Akhenaten created massive social, religious, and economic turmoil through the simple expedient of replacing Egypt’s 1300-year tradition of polytheistic religious belief with monotheistic worship of the Aten at the state level. The Aten is a sun god of sorts, represented by the visual sun disc in the sky. Akhenaten venerated his newly sanctified deity soon after his ascension to the throne by ordering a city built on land previously unspoiled by the worship of other gods and goddesses (Kemp, 2012; Davies, 1908). Situated nearly equidistant between the ancient religious (Thebes) and administrative (Memphis) capitals of Egypt, Akhetaten was the unified religious and administrative capital of Egypt for the duration of its short occupation (Kemp, 2006; Shaw, 2004). Craniometric analysis of the skeletal sample from the city’s largest cemetery suggests the population originated from through-

out Egypt (Dabbs and Zakrzewski, 2011). Shortly after Akhenaten’s reign ended, the city was abandoned and many of the surface structures were removed, with the stone building material being transferred to and repurposed at other locations (namely Hermopolis, across the Nile River). The abrupt abandonment of the city and lack of subsequent habitation has preserved the archaeological site at Amarna (Kemp, 2006; Shaw, 2004). Today, it represents the largest known living site from New Kingdom Egypt (Shaw and Nicholson, 1996), providing an unprecedented look at life in the ancient capital.

In 1798 and 1799 savants of the French Emperor Napoleon conducted surveys of Amarna in connection with his Egyptian Expeditions (Pancoucke, 1826). Since that time, the site has undergone regular and nearly continuous investigations by both professional and amateur archaeologists. As such, much is known of the daily lives of the ancient residents. Geophysical survey of the desert surrounding the main city identified several previously unrecognized cemeteries in 2005 (Kemp, 2005). The first focus of the cemetery excavation project has been on the South Tombs Cemetery (STC), a large cemetery of 3000–4000 individuals so named due to its close proximity to the South Tombs, which were constructed for Amarna-period high officials (Ambridge and Shepperson, 2006; Dolling, 2007, 2008; Kemp, 2009, 2010; Kemp

* Corresponding author.

E-mail addresses: gdabbs@siu.edu (G.R. Dabbs), mel.harvey@arkansas.gov (M. Zabecki).

et al., 2013; Stevens, 2009, 2012). The STC was extensively robbed in antiquity resulting in the loss of many of the cultural materials included in Amarna-period graves and the mortuary context provided by these elements (Kemp, 2005; Kemp et al., 2013). However, the diverse mortuary treatments observed within the cemetery suggest the STC was the final resting place for members of all social strata save the highest, who were placed in the nearby rock-cut South Tombs and other elite tombs at Amarna (Kemp et al., 2013).

The skeletal remains from the non-elite STC at Amarna ($n > 400$), present a picture of lives filled with high levels of general, nutritional, and workload stress. General indicators of stress include high post-infancy subadult mortality, short adult stature, and high frequency of linear enamel hypoplasia. Nutritional stress is directly reflected by the skeletal lesions of *cribra orbitalia*, porotic hyperostosis, and lesions characteristic of scurvy. Workload stress in adults is manifest in high frequency of vertebral trauma and degenerative joint disease (Kemp et al., 2013). Given this evidence, it is suggested the social, religious, and political upheaval caused by Akhenaten's devotion to the Aten extended into the realm of individual health as well (Kemp et al., 2013; Rose, 2006; Rose and Dabbs, 2012; Zabecki, 2007, 2008, 2009; Zabecki et al., 2011; Zabecki and Rose, 2010). Here, data are presented on the presence of anomalous scapular lesions identified on five adult males ($n = 84$ adult males) excavated from the STC and present possible biocultural explanations for their presence.

2. Materials and methods

This study focuses on five individuals who exhibit slot-type fractures on at least one scapula. As described by Bauer and Patzelt (2002), a slot fracture is the wound slit in bone created by a stab wound. These usually correspond to the dimensions of the penetrating object, although a struggling victim can cause larger and more irregularly-sized wounds (Spitz, 1993). At least three other individuals exhibit similar types of perforating lesions on the scapula. However, taphonomic conditions of the bone preclude extensive analysis of these three individuals.

Where possible, adult age estimates were based on the morphology of the pubic symphysis (Brooks and Suchey, 1990) and auricular surface (Lovejoy et al., 1985) and the degree of fusion of the cranial sutures (Meindl and Lovejoy, 1985). Sex estimations were based on the morphology of the pelvic elements and cranial morphology (Buikstra and Ubelaker, 1994) where possible, with preference given to the pelvic morphology. When neither the cranial nor pelvic elements were available for analysis, or the results were ambiguous, both published standards and un-published Amarna-specific metric standards were used to estimate sex (Dabbs, 2010; unpublished data). Percentage of the skeleton available for analysis was estimated by observers based on the number of elements recovered, with accommodation for the size of individual elements. Paleopathological analysis was conducted via macroscopic examination of skeletal elements. Written descriptions, photographs on the microscopic and macroscopic scale, and X-rays of identified lesions were produced. Differential diagnosis of common conditions was attempted where possible.

The thickness of the scapular lesion borders was measured using the L-shaped arms of Hillson-Fitzgerald dental calipers. Most lesions were situated such that the border thickness could be easily measured. However, the more centrally located lesions, especially on the larger scapulae, were outside of the reach of the caliper arms and therefore could not be measured. Additionally, measurements of the scapular body thickness were recorded at locations 5 mm away from the lesion border for comparative purposes. Given the variable thickness of the scapula body in general, care was taken to ensure the region surrounding the lesion was quantified and the

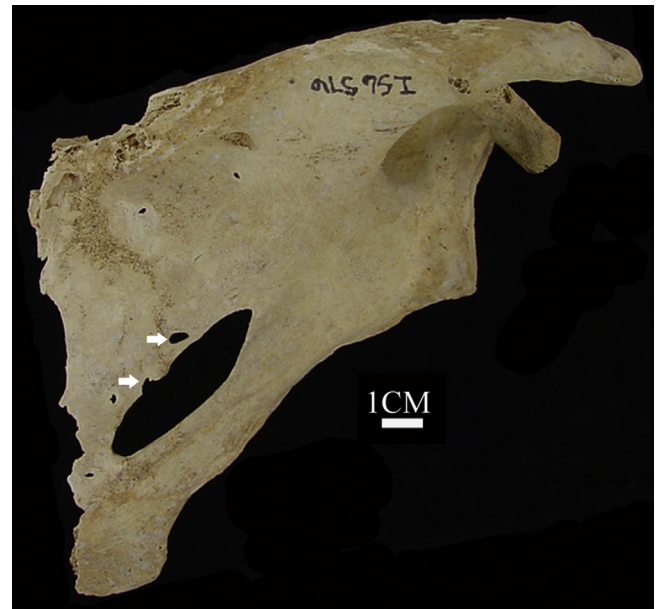


Fig. 1. Scapular lesion on the right scapula of Ind56. White arrows indicate taphonomic damage.

normally thickest regions, such as the lateral border and glenoid prominence, were avoided.

2.1. Individuals with scapular lesions

The scapular lesions and other skeletal trauma described below are summarized in Table 1.

2.1.1. Individual 56 (adult male, >40 years)

Only 55% of the skeletal remains of Ind56 were recovered, and with the exception of the preserved feet, all elements are representative of the head, torso, and upper limbs. The medial border of the right scapula of Ind56 is badly broken postmortem, but the lateral half of the bone is well preserved. It exhibits a healed slot-type fracture, paralleling the lateral border (Fig. 1), which measures 46.42 mm by 11.50 mm. The average border thickness of this lesion is 1.24 mm, and the scapular body immediately medial to the wound margin averages 0.57 mm thick. In addition to the slot-type fracture, this individual also has a healed, well-aligned fracture of the right clavicle, one healed left rib fracture, spondylolysis of the fifth lumbar vertebra, and a compression fracture of the fifth lumbar vertebral body.

2.1.2. Individual 102 (adult male, 35–45 years)

Ind102 exhibits a slot-type fracture on the left scapula inferior and roughly parallel to the scapular spine (Fig. 2). This largest lesion measures 29.54 mm long and 9.18 mm wide with an average border thickness of 1.15 mm. The body just inferior to the lesion margin has an average thickness of 0.73 mm. The body superior to the lesion was not measured due to the obstructing presence of the scapular spine. This element also exhibits two additional round foramina medial to the slot-type fracture, but these are not considered traumatic and are likely scapular foramina (see discussion below). There is also a small defect visible near the inferior angle, but this is taphonomic. In addition to the scapular lesions, this individual also exhibits significant traumatic injury in the region of the left knee, where the three elements (femur, tibia, and patella) were fused together with approximately 90° flexion.

Download English Version:

<https://daneshyari.com/en/article/6554839>

Download Persian Version:

<https://daneshyari.com/article/6554839>

[Daneshyari.com](https://daneshyari.com)