Introduction

• Carrier Mills Archaeological site (11SA87)
  • Southern Illinois along the South Fork of the Saline River in Saline County, IL (Fig.1)
  • Located between many different diverse ecosystems: Forested uplands, wet floodplains, and cypress swamps, prairie and grassy areas, rivers, and lakes (2-3)
  • Diverse variety of accessible plants and animals
  • Occupation of the site dates as from 10 kya
  • Majority of archaeological material dates to Late Middle Archaic period (4-7)
  • Middle Archaic period = Increased sedentism w/in Middle/late Holocene
  • Middle accumulation at Carrier Mills suggests year-round occupation
  • Mortuary treatment
    • Human skeletal remains: MNI = 275
    • Dated to Late Middle Archaic period (2-3)
    • Individuals were interred in middens extended & flexed positions, mostly facing West (2,3)
    • Middle-age adult males = twice as likely to have associated with utilitarian & ceremonial/ornamental items
    • Carved stones, beads, etc.
    • Females were primarily associated with utilitarian objects for food processing

Research Goal:

• Examines the everyday experiences of chronic illness and non-lethal violence for a Late Middle Archaic individual in a Midwest hunter-gatherer community

• Using the Bioarchaeology of Care model, we develop a general model of care, including how much healthcare provisioning would be needed, and how the individual’s identity may have changed as a result of his injuries

Materials and Methods

• Bioarchaeology of Care
  • Tilly (1995) proposed that it is possible to infer healthcare in the archaeological record through using a Bioarchaeology of Care (BoC) model to evaluate one or more individuals providing a closer insight to what life would have been like for the individual, their family and community
  • We utilize Tilly (1995)’s BoC stages modeled in Figure 3 and the following definitions:
    • Care - the provision of assistance to an individual who is experiencing pathology or trauma allowing them to survive
    • Disability - a state of temporary or longer-term impairment in function or structure of the body that is associated with activity limitations or participation restrictions
    • Direct support - immediate care needed to survive while accommodation of difference can help the individual participate in society.

Individual 194

• Intergred in Area A of site 11SA87
• Pit buried w/in midden
• Beginning at 85 cm & ending at depth of 108 cm below surface (see Fig. 4)
• Directedly under the body was (Munsell color 11 YR 4/2) Dark Greyish Brown soil
• Original analysis by Basset (1967)

“One individual in the Area A Archaic subgroup is worthy of further comment. It had a condition so peculiar that it sheds some light on the Carrier Mills Archaic culture as a whole. This 45-year-old male suffered crushed first and second lumbar vertebrae...resulting in a damaged spinal column. His entire skeleton, below the neck shows the “furry” remodeling characteristics of quadriplegia...The stenosis is twice its normal thickness, and rough eburnations have begun growing on the articular surfaces of the long bones. The legs are dissociated from the ilium...These bone growths suggest that the individual lived many years after becoming completely paralyzed. This seems congruous with the concept of a highly mobile hunter-gatherer society and provides additional support for the presence of a year-round late Archaic occupation at Area A (105).”

Stage 1

Individual 194: 30 – 45 year-old male
• Est. height: 5’6” – 5’8”

Mortuary Treatment
• Flexed on right side, oriented West
• No grave goods

Pathology:
• Antemortem trauma (confirmed via x-ray)
  • Nasals
  • L. Maxilla
  • Distal R Radius
  • L. Ribs 8 – 10
  • Crushed T10 & T11
• Compressed sciatic nerve and spine
• General periositis
• Eburnation C3
• Multiple abscesses
• Edentulous maxilla w/ infected hard palate
• Active bone - both arcsades
• Marked wear on mandibular dentition
• Focal depressions on L 3rd Rib
• Osteoarthritis
• Dislocated R Os Coxae (Fig. 8)
• Pseudopoint
• Multiple Acute Cloaca

Stage 2

• Dislocated R Hip
• Impacted several muscles of the pelvic girdle & gluteal regions
• Extra bony growth on ilium prevents normal mobility of R femur = only extend leg posteriorly by 1º (at angle of 181º w/ hip as fulcrum)
• Suggests his leg was always slightly flexed at knee preventing normal walking gait, but still had some use
• Severe restriction on sciatic notch = pinched nerve & chronic pain?
• Mostly immobilized L elbow
• Impacted flexors and extensors in L forearm (10)
• Potential impact to upper arm and hand muscles
• Examination of articulation of L humerals, radius & ulna
  • Could not extend L elbow more than 112.5º & flex elbow more than 49.1º
  • Could not pronate or supinate his L forearm

Stage 3

Immediate Care Required:
• Stabilize R wrist
• Potential realign R hip
• No treatment of nose/ribs
• Months of round-the-clock care required for vertebral fracture
• Ozoeing, painful pustules from the treponemal infection that would likely further hindered his already limited mobility
• Treponemal disease combined with poor dental health also likely impacted his diet, as he probably would have had trouble eating that may have resulted in chronic malnourishment. He also may have had difficulty speaking due to the pustules.
• Compressed sciatic nerve and spine- likely in pain from his injuries

Stage 4

Individual 194’s healthcare provisioning would have had a long-lasting impact on his daily activities and those of his family (and possibly his community)

• Pre-activity injuries: hunting and fishing, protection, tool production, shelter construction, and possible leadership or ceremonial roles (Provider)
• After injury/ onset of condition: could not longer conduct his traditional roles in his family and community (change of identity)

May provide knowledge and guidance.

References


Acknowledgements

• We would like to acknowledge the traditional people who have come before us and recognize their continuing connection to this land, waters, and culture. We pay our respects to their Elders past, present and emerging. We also would like to thank the Center for Archaeological Investigations for access to their site reports, to the skeletal remains of Individual 194, and for permission to use the Carrier Mills Archaeological Project: Fascinating Finds. Center for Archaeological Investigations, Southern Illinois University, Carbondale, Illinois; in J. L. Phillips, & J. A. Brown (eds.), Archaic Hunters and Gatherers in the American Midwest. New York: Academic Press.