

Paleopathology

- Health status (diseases, conditions, traumas)
- How to identify health????????????????????
- Problems in identifying specific diseases:
 - Most diseases/ illnesses leave no marks on skeleton
 - Different diseases can affect bones in same way
 - Will leave skeletal marks
 - Arthritis, chronic infection (TB, syphilis, leprosy)
 - Staphylococcus
 - Streptococcus
 - Dietary deficiency (pellagra, rickets)
 - Will not leave skeletal marks
 - Acute infections (flu, pneumonia)
 - Diseases that kill quickly
- Look at stress instead
- Definition: nutritional/ disease stress severe enough to interrupt growth of bone metabolism (See Larsen 2005)
- Harris Lines
 - Lines of increased bone density (mineralization) on long bones
 - Sign of growth disruption
 - 0-18 years
 - Only visible in x-rays
 - Fade with time as bones remodel
 - Greater width= longer period of biological stress\\
 - Number of lines= number of times it occurred
- Enamel hypoplasia
 - Growth arrest lines in teeth
 - 7 months- 3 years
 - visible to naked eye
- 1. Retzius or Wilson Lines
 - Microscopic
 - Growth arrest lines in tooth enamel
 - Must more sensitive indicators
 - Very sensitive stress markers: a natal line caused by stress of birth
- 1. Porotic hyperostosis
 - Pitting or sponge-like lesion of skull
 - Indicate disease or nutrition deficiency caused by anemia
 - Low in red blood cells
 - Diarrheal disease, intestinal parasites
 - Sickle cell
 - Iron deficiency (dietary) or chronic slow blood loss
 - Vitamin B12 or folic acid deficiency
 - Thalassemia
 - Kidney disease
 - Malnutrition
- 1. Cribra orbitalia

- Similar to porotic hyperostosis but in top of eye sockets
- Can develop at any age
- 1. Tibial periostosis
 - Severe infection of periosteum (connective tissue around shin bones- tibia and fibula)
 - Indicator of general ?? infections
- Trauma Case Study 1: Violence in Prehistoric Michigan (Wilkinson 1997)
 - Riviere au Vase cemetery
 - AD 1000-1300
 - Sample= 212 (98 males, 114 females)
 - Male
 - Cranial fractures
 - 4 of 98 (4%)
 - moderate (cranial bones was not driven into the brain)
 - All front of skull
 - Female
 - 15 of 114 (13%)
 - Severe
 - All over skull
 - What this pattern for women represent?
 - Female Amazon warriors?
 - Sacrifices?
 - Spousal abuse
 - Interpersonal violence?
 - Raiding for women

Trauma Case Study 2: Violence in Prehistoric Peru (Tung 2012)

- Conchopata—a site of the Wair Empire (AD 600)
- Two deathways
 - Normal burial
 - Violence
 - Male
 - 4 of 14 (29%) have fractures
 - Fracture location
 - 57% back f=of skull
 - 29% front
 - 14% atop skull
 - Female
 - 6 of 25 (24%) have fractures
 - Fracture location
 - 78% back
 - 2 atop skull
 - Hit to head very common (1/4 of adults suffer skull fractures)—a violent society

- Wari civilization more violent than “tribal” society of prehistoric Michigan
 - Gendered violence: women not hit in face-to-face manner
 - Men- mostly face to face (combat)
 - Women- fleeing or ducking
 - In this “normal burial” category, one elderly female stands out:
 - Exposed to more violence than other Conchopata women
 - Injury recidivism (serially battered)
 - Healed fracture back of skull
 - Partially healed fracture on top
 - Some front teeth knocked out
 - Ritual sacrifice, trophy head (only find heads)
 - Adult males, children dismembered, transformed into trophies (no females)
 - Sample of 32 individuals associated with ritual structures
 - All but one turned into trophy heads
 - Exception: only non-trophy head:
 - Adolescent female: not butchered
 - But was she sacrificed (Tung assumes so)
- What do the 2 “exception” burials (elderly woman, girl) at Conchopata have in common
 - Non-local (outsiders)
 - Elderly woman
 - Cranial deformation
 - Different genetic group
 - Unique burial treatment
 - Lived most of life at Conchopata (born there too foreign parents of brought as infant)
 - Girl
 - Different bone chemistry from locals
 - Born elsewhere, came to Conchopata between ages 7-17
- Whether a person an insider or outsider a powerful structuring force in how treated in life (violence) and in deathways
 - Suggest importance of community membership in Wari society
 - Membership as aspect of gender identity
 - Points to some topics for future archaeological research
- Analyzing Ritual as Performance
 - Action/ Plot
 - Costume
 - Multimedia
 - Props
 - Lyres