



Deciphering Disability Narratives in 3rd–4th Century Roman Irchester: Looking Past Mobility Impairments

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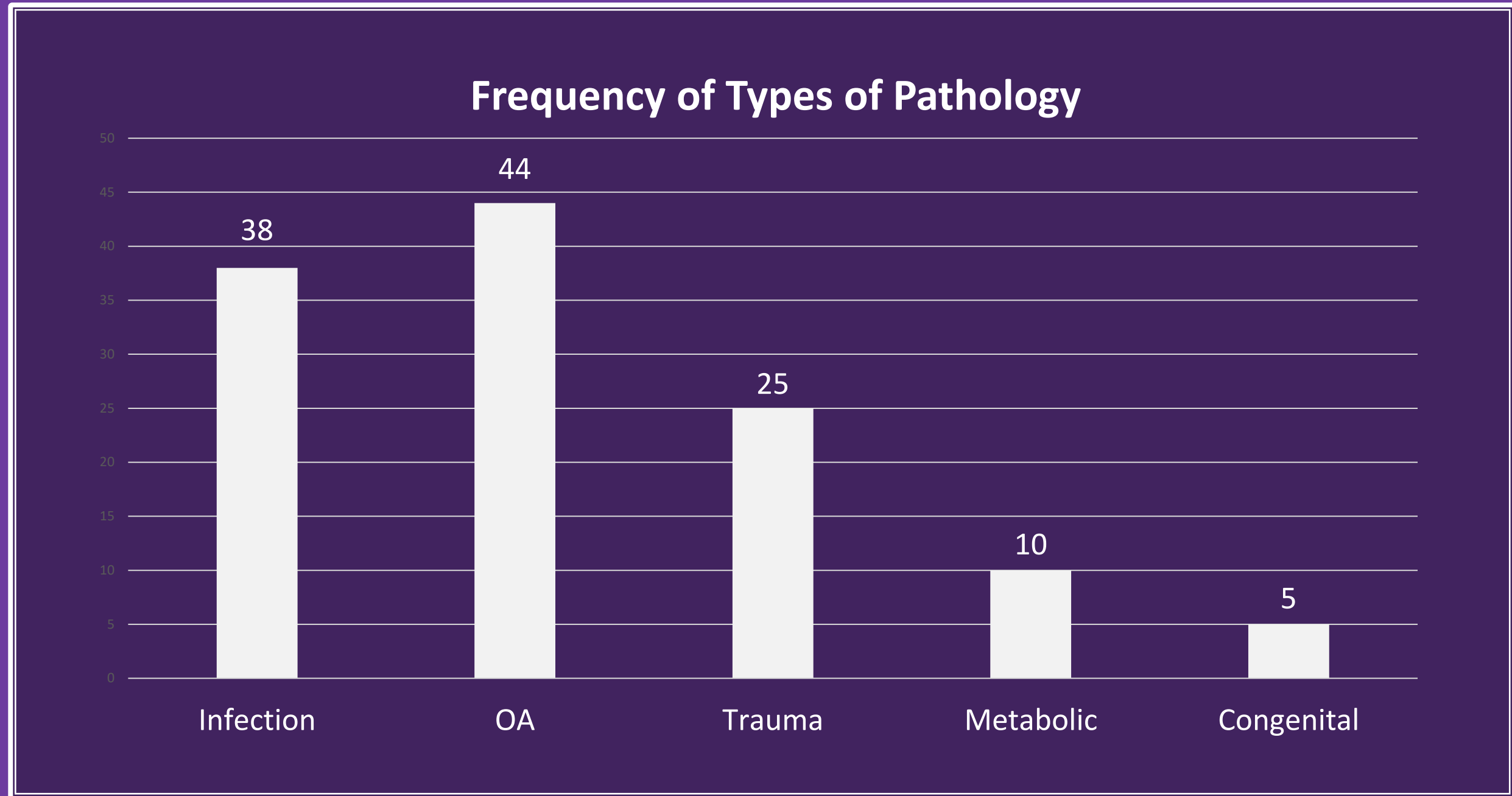
Introduction

Inspiration: Impairment is as much a part of life today as it was in the past. Osteoarchaeological studies of disability often focus on the most skeletally visible impairments (i.e. caused by joint disease, trauma, congenital malformations), meaning sensory or neurological disabilities are less often included in reconstructions of life in the past.

Aims: To examine quality of life, degree of disability, and access to healthcare for two individuals with lesions that primarily encompass sensory or neurological impairments in 3rd–4th Century Romano-British Irchester, UK.

Approach: Macroscopic skeletal analysis and the Index of Care through a disability studies framework.

Results



Outliers to the Average Life Course

PSN 32 Multiple Fractures and Associated Frailty

- **Lesion Description:** Multiple fractures at different stages of healing across appendicular skeleton, including active injuries in bilateral lower limbs, healed and non-union fractures on the left ulna, and a well-healed fracture of the right clavicle (Fig.3).
- **Impact:** Suggests individual was prone to injuries, falling frequently⁶. Older age indicates predisposition to generalised frailty, but could be exacerbated by an impaired sense of balance or sight, e.g. vertigo or conditions of the inner ear⁷.
- **Care:** Assistance with daily essential activities (e.g. feeding, dressing, hygiene) during periods of fracture healing and use of analgesic remedies.
 - Recurring partial immobilisation means a relatively constant level of dependence in later stages of life, particularly if visual and balance disorders present. Mobility aids may help with some independence.
 - Sight loss may prove a particular barrier in less familiar environments, but not in places with familiar topography (e.g. in the home, or within Irchester)⁸.
- **Lived experience:** 50+ year old female. Caregiving duties likely fell on family, extended network, and slaves. Balance disorders and frequent immobilisation may lead to social exclusion due to increased pain levels and anxiety, and frequent consumption of analgesics may impair mental capacities^{7,9}. Visual impairment would likely prevent her from leaving Irchester independently. Injury pattern could also be interpreted as a case of elder abuse, as older Roman women tended to lose social status and become increasingly economically dependent on their caregivers, putting them at higher risk for abuse^{10, 11} (Redfern 2017; Cokayne 2003)



Figure 3: Skeletal elements from PSN 32. Above: L femur, transverse fracture around midshaft with thick woven bone surrounding injury site. Below: Left ulna with non-union fracture on proximal shaft.

Sources — 1: Morris, S. (2017). *Archaeological Excavation at Lime Avenue, Chester Farm, Irchester, Northamptonshire November 2014-2015*. MOLA Northampton, Northampton. 2: Bulkstra, J.E., Ubelaker, D.H. (eds). (1994). Standards for Data Collection from Human Skeletal Remains: Proceedings of a Seminar at The Field Museum of Natural History. *Arkansas Archaeological Survey Research Series*, 44. 3: Falys, C.G., Prangle, D. (2015). Estimating Age of Mature Adults from the Degeneration of the Sternal End of the Clavicle. *American J. of Phys. Anth.*, 156: 203–214. 4: Tilley, L., Cameron, T. (2014). Introducing the Index of Care: A web-based application supporting archaeological research into health-related care. *Int. J. of Paleopath.*, 5: 5–9. 5: Bohling, S., Croucher, K., Buckberry, J. (2022) The Bioarchaeology of Disability: A population-scale approach to investigating disability, physical impairment, and care in archaeological communities. *Int. J. Paleopath.* 38: 76–94. 6: Pecci, M., Kreher, J.B. (2008) Clavicle Fractures. *Am. Fam. Physician*, 77(1): 65–70. 7: Fancello, V., Hatzopoulos, S., Santopietro, G., Fancello, G., Palma, S., Skarzynski, P.H., Bianchini, C., Ciorba, A. (2023) Vertigo in the Elderly: A Systematic Literature Review. *J. Clin. Med.* 12(6): 2182. 8: Trentin, L. (2013) Exploring Visual Impairment in Ancient Rome. In: Laes, C., Goodey, C., Rose, M.L. (eds) *Disabilities in Roman Antiquity: Disparate Bodies a Capite Ad Calcem*, pp. 89–114. 9: Keefe, F.J., Porter, L., Somers, T., Shelby, K., Wren, A.V. (2013) Psychosocial Interventions for Managing Pain in Older Adults: Outcomes and Clinical Interpretations. *Br. J. Anaesth.* 111(1): 89–94. 10: Redfern, R.C. (2017) *Injury and Trauma in Bioarchaeology: Interpreting Violence in Past Lives*. Cambridge, Cambridge University Press. 11: Cokayne, K. (2003) *Experiencing Old Age in Ancient Rome*. London, Routledge. 12: Julayanont, P et al. (2016) Bacterial Meningitis and neurological Complications in Adults. *The Southwest Respiratory and Critical Care Chronicles*, 4(14): 5–16. 13: Harlow, M & R. Laurence (2002) *Growing up and Growing Old in Ancient Rome: A Life Course Approach*, Routledge, London. 14: Redfern, R. (2020). *Changing People, Changing Settlements? A Perspective on Urbanism from Roman Britain*. In: Betinger, T.K. & DeVitte, S.N. (eds) *Bioarchaeology of Urbanisation: The Biological, Demographic, and Social Consequences of Living in Cities*. Bioarchaeology and Social theory. Springer International, Switzerland. **Images** — Background image: *Images of the Human Body* (2000) Pepin Press. All photos created by the author.

Materials & Methods

Irchester was a Roman town situated in the Middle Nene Valley, near modern day Northampton (Fig. 1, 2). Due to its key position in the Northamptonshire trade networks, it developed into an urban centre in the 1st C AD during the British Iron Age, with continuous occupation throughout the Roman occupation. The three known cemeteries outside the walls of the late Roman town total over 130 burials, likely drawing from urban population and surrounding rural areas¹.

This study utilised a subsample of 57 individuals, including 21 females (F and PF), 29 males (M and PM), and was skewed towards Middle Adults (N=31). From this sample, two individuals with non-mobility related impairments were chosen as case studies.

Standardised macroscopic methods were used for gathering demographic data^{2,3}, and paleopathological analysis was performed following the Index of Care⁴ and Bioarchaeology of Disability frameworks⁵.

Discussion: Average Life Course for Sample

- **Childhood physiological or nutritional stress.** 36.6% prevalence of enamel hypoplasia, 13.8% Cribra Orbitalia.
- **Activities and occupations involving the upper body.** OA disproportionately affected spine (38.5%) and shoulder girdle (20.8%) Possibly related to agricultural practices.
- **Acute localised infections.** 64.4% of sample presented periosteal reactions, most frequently on lower limbs (31%) – temporary loss of limb mobility common.
- **Bone fractures of upper body.** 20% of all fractures affected shoulders, arms, and ribs. Echoes OA rates, likely occupational, majority well set and healed with no infection.

Figure 1: Bar chart showing frequency of pathological lesion types recorded across entire Late Roman Irchester subsample

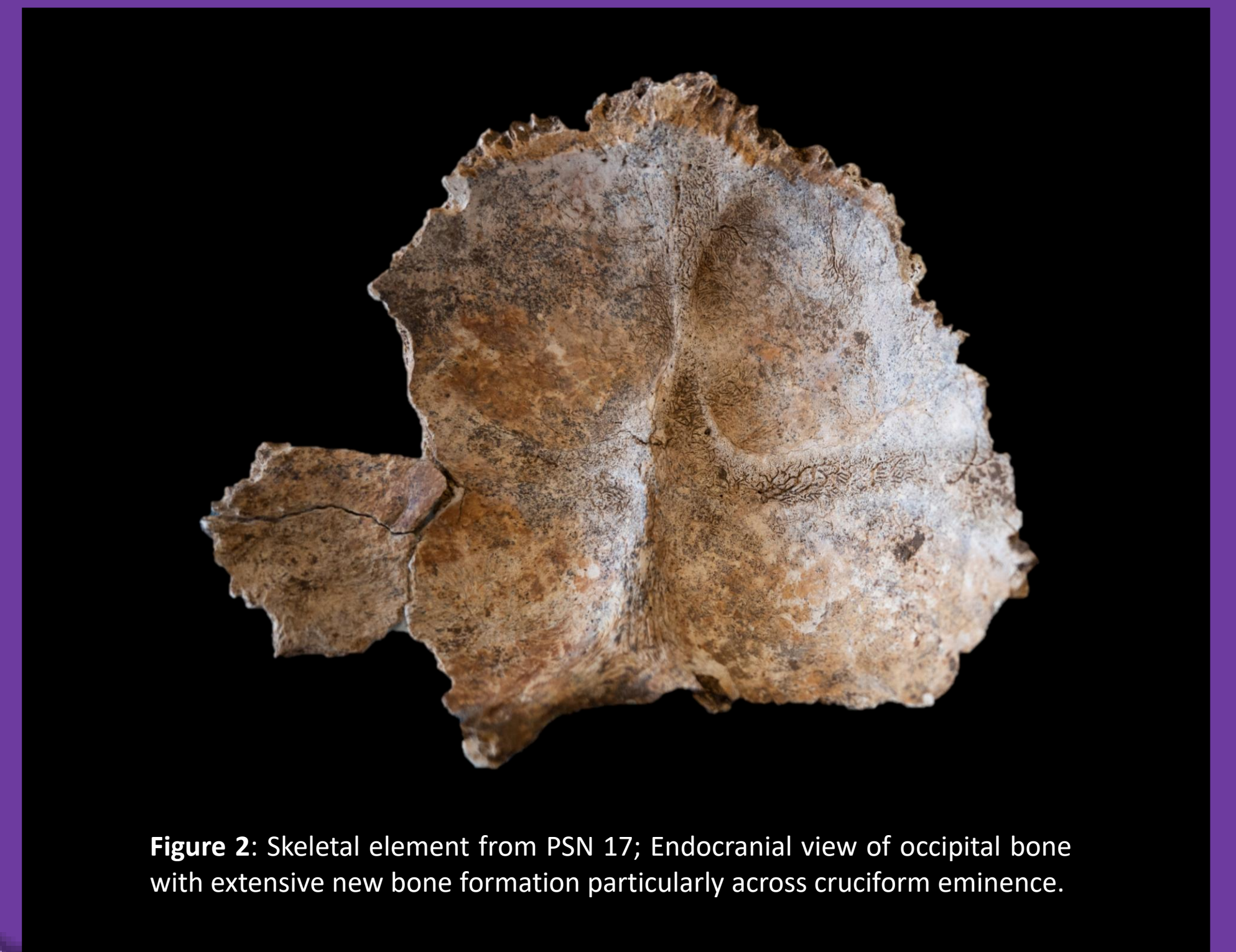


Figure 2: Skeletal element from PSN 17; Endocranial view of occipital bone with extensive new bone formation particularly across cruciform eminence.

PSN 17 Chronic Meningeal Inflammation

- **Lesion Description:** Extensive active new bone formation (NBF) across entire calvarium, including vascular impressions (Fig.2) – suggest infection lasting several weeks.
- **Impact:** Depending on aetiology (viral, bacterial, fungal, etc.) may lead to coma or death within a few days without antibiotic treatment.
 - Potentially started recovering, where NBF indicates healing. However, extent of inflammation suggests neurological sequelae, such as hearing and sight loss, reduced motor skills, and development of neurological disorders (e.g. epilepsy)¹².
- **Care:** If in a coma, limited to maintaining hydration, but survival unlikely beyond a week. If recovering but with sequelae, assistance with basic daily activities based on extent of motor function loss, and herbal seizure treatments.
- **Lived experience:** 17–25 year old female. Likely married at the time of death¹³. Caregiving responsibilities could fall on family, husband, or slaves, depending on social status. Meningitis spreads quickly after close contact, so she likely knew others with same disease. Individual experiences of meningitis vary widely depending on environmental and host factors, making local survival or recovery rates unknown, especially as no others in this study had similar lesions¹².

Conclusions

Mobility impairments, dental diseases, childhood stress, and age-related conditions were an expected part of life in Irchester, mirroring the national pattern of Romano-British health¹⁴. These conditions were not typically seen as disabling, and effective treatment and care was likely available and established in some form.

Despite the availability of care, the way impairments were perceived socially, and how they interacted with individuals’ demographic profiles, would indeed have deeply affected disabled peoples’ life experiences.

While assessing sensory and neurological conditions is a particularly difficult task in osteoarchaeology, it is worthwhile to further elucidate the variability of lived experiences in past populations. Further research on this population hopes to build on the growing field of bioarchaeology of disability, and incorporate more interdisciplinary methodologies, to further elucidate the rich role disabled individuals played in their communities in the past, as they do today.