

The life of the medieval child: a new methodological perspective on childhood skeletal injury

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Introduction

The nature of the lives of children in the past and how they were perceived is a subject of interest to historians and archaeologists alike. A dynamic interaction between cultural and biological factors determines the concept of 'childhood', which is variable across cultures. The study of the remains of the children themselves can reveal direct evidence of injury or illness and so enrich our knowledge of the nature of daily life - hopefully aiding in reconstructing the cultural concept of medieval childhood.

Aims and objectives

The study of skeletal injury can supply information about daily risks, but also life quality and patient care (Fig. 1). Such matters have rarely been examined for children, mainly because skeletal evidence is relatively scarce. In modern populations, a third of all children suffer a fracture before they reach 16 years of age (1); therefore this relative lack of evidence in historical skeletal child populations is striking. This project aims to re-assess skeletal child populations for fractures through a new methodology.



Figure 1. Skeletal injury or fractures can sometimes be very apparent on bone. This adult femur shows a healing, displaced fracture. Femoral fractures indicate a high impact injury. The small amount of overlap in this case suggests knowledge of fracture healing and temporary immobilization of the patient. Image from Ortner, D. J. (2003) *Identification of Pathological Conditions in Human Skeletal Remains*, Academic Press: London, 127.

Rationale and Methodology

Children's bones have different characteristics than those of adults; some fracture patterns are unique to childhood. The study of present-day clinical data is therefore of value to understand childhood bone biology and enable us to predict the appearance of fractures on the skeleton. A level of caution must always be maintained, as some causes of fracture in clinical studies are exclusively modern (2) (Fig. 2). Based on the literature, a list of bone changes that may indicate past injury was created. Depending on their diagnostic strength, they can indicate trauma directly, or can prompt further examination by X-ray in more subtle cases.



Figure 2. Knowledge about the nature of medieval childhood is important, as different activities and risks must be considered compared to a modern population. Textual evidence suggest that from the age of 7 children were slowly inducted into society by performing small and simple tasks. Up until the age of 12, however, play still took up much of a child's time. Image from Gilchrist, R. (2012) *Medieval Life. Archaeology and the Life Course*. Boydell Press: Woodbridge, Pl. 6.

Preliminary results: case studies

Case 1

- Age: newborn
- Date: Norman (12th-13th century)
- Provenance: St. Oswalds priory, Gloucester.



- Description: fracture of the clavicle (collarbone). Fracture line is evident on X-ray (arrowed)
- Interpretation: a relatively common fracture during childbirth, often linked to difficult deliveries. This child survived long enough for healing to take place, suggesting that despite these difficulties, the delivery was successful.

Case 2

- Age: 4-5 years
- Date: 12th-16th century
- Provenance: St. Giles, Brompton



- Description: fracture of midshaft radius and ulna. Comparison with normal side reveals unusual curve of the bones (arrowed).
- Interpretation: this deformation likely indicates a typical childhood fracture mechanism, where the bone bends without breaking. In modern cases, this happens as the result of a child falling on an outstretched hand (3). This type of injury might result from everyday play activities such as those described in the textual evidence.

Conclusion

This study indicates that osteological investigation of childhood skeletal injury may reveal a great deal about the risk for fracture in childhood and may broaden our understanding of the cultural concept of childhood in medieval times. Initial results show fascinating glimpses of the personal narratives of individual children. These case studies will be valuable reference cases for further osteological investigation.

References

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