Newington Hotel Roman Cemetery – Further Research Potential

An Insight Report

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Osteoarchaeological analysis of human remains recovered from the site of the former Newington Hotel has highlighted two individuals whose remains merit consideration for further detailed study.

Summary
In the spring of 2017 York Archaeological Trust undertook the excavation of part of a Roman cemetery at the site of the former Newington Hotel in advance of its redevelopment. Across an area covering approximately 100m² the remains of 78 individuals were recorded and recovered by archaeologists from YAT. Previous excavations in the immediate vicinity place the recent discovery in a wider Roman cemetery setting, itself part of an extensive funerary landscape extending along Tadcaster Road on its approach to the Colonia.

The burials do not appear to have been especially elaborate, with intercutting of many grave indicating that even grave makers were absent throughout this part of the cemetery.

Artefactual evidence shows the cemetery to have been active from the mid 2nd to mid 4th century, and although two cremation burials were found the vast majority of in situ burials (76) were inhumations. The individuals occupying the cemetery were usually buried quite simply, often in wooden coffins fastened with iron nails and sometimes accompanied by pottery grave goods. There was however very little evidence of personal adornment in the assemblage. The few examples found were that of a jet hair pin in the grave of a teenager, and the fragile remains of what might have been a gilded copper alloy head band or hair strap found lying across and staining the brow of a mature female, aged at least 46 years at the time of her death. In addition a small fragment of an ivory object, possibly a ring, and a military style dagger were recovered but had clearly been disturbed from their original setting.

Although simply furnished the graves do reveal something of the care and reverence afforded to those laid to rest, and while some expense was clearly laid it is probable that the individuals buried here were of relatively limited means. For example many of the ceramic grave goods display little sign of wear through use, perhaps an indication that they were acquired specifically for the funeral rights. Is it possible we are seeing evidence of members of burial clubs who are drawing on that resource for themselves or their relatives?

Osteological analysis of the human bone assemblage has been carried out by Katie Keefe of York Osteoarchaeology Ltd. Some interesting trends have been found. In many Roman cemeteries males are found to outnumber females, particularly in the larger urban cemeteries (Davison 2000); the demographic profile of the population buried at the Newington Hotel follows that broad trend, however Keefe notes that the male/female ratio differs significantly from the normal sex distribution with the sexed adult population showing that males comprised 70.5% of the cemeteries population. In addition males were found to be slightly taller than the norm for the period, ranging height 160.3cm to 188.3cm (5’3” to 6’2”), with a mean stature of 170.26cm (5’7”), while females were slightly shorter than the average for the period, ranging from 151.1cm to 160.4m (4’11” to 5’3”) (Keefe in prep).
### Potential further study
Two skeletons raise the prospect for additional analysis. In one case there is evidence for a surgical amputation. This may be the earliest evidence for this procedure to have been found in the UK, and by some margin. Currently the earliest evidence for such surgery dates to the 17th century (Keefe, pers comm). A second skeleton has been highlighted by Keefe as potentially its ancestry lies well beyond Northern Europe.

**SK79, Set 3127: Amputee?**
Aligned northwest to southeast the lower legs and feet of this individual were found extending from the north-western limit of excavation. It is likely that the body was laid in an extended supine position. Fragments of a grey ware jar dating to the 2nd to mid 3rd century appear to be the remains of a ceramic grave good laid close to the left leg.

![Plate 1 SK79 displays evidence for the surgical amputation of the lower left leg](image)

Aged 18+ the sex of this individual could not be determined, however its stature would have been in the range of 164.4cm to 171.2cm if male, or 160.5cm to 167.9cm if female.

Pathologies were identified as possible perimortem, comminuted fracture to left tibia. Unhealed amputation of lower limb through the midshaft of the left tibia. Lamellar bone on right tibia. Woven bone on left tibia.
The original injury appears to be a break to the midshaft of both the tibia and fibula. Two surgical incisions have then been made, at the distal end of the tibia and again across the middle of the tibia just above the break and close to the point where the fibula had fractured. Both incisions have been made with a saw.
Plate 4 Detail of upper portion of left tibia showing saw marks at a point above the fracture

That the amputated section of the leg and foot had been placed in to the grave along with the rest of the body indicates that this individual died shortly after the surgery, perhaps as a result of the surgery itself. It is unfortunate that only part of this grave extended into the excavation area, we can only speculate as to what if any other injuries may have contributed to this person’s demise.

Research questions:

- What could have caused this type of fracture?
- Might the incisions in fact be post mortem and not necessarily surgical?
- Might this sort of leg break be fatal as of itself?
- Why are there two incisions?
- Is there any reason to have cut the leg just above the ankle at a point below the fracture?
- Do the saw marks indicate anything about the direction of the incisions, where they start and finish?
- What can be inferred about medical practice in the Roman period?
- What can the spacing between the saw marks tell us about the tool used
- What is the archaeological evidence of surgical tools in the Roman period
- Is there any other evidence for surgical procedures dating to the Roman period beyond the UK

SK56, Set 3117: Visitor from afar?

Aligned southeast to northwest only the skull, upper arms and torso of this individual survived in situ, the remainder having been truncated by later intrusion, likely including a separate burial (Set 3138). The dates of pottery retrieved from the backfills of both graves suggest a late 1st to 2nd century date for the burial is probable. What remained of the skeleton suggest that the body was laid in an extended supine position.
Aged between 26 and 35 years at time of death this individual was probably female and stood at between 154.3 cm and 162.9 cm.
Analysis of dental pathology identified calculus, caries, AMTL, DEH, and a retained deciduous tooth.

Other pathologies identified were Schmorl’s nodes in lumbar spine, mild vertebral border shift at cervical thoracic border and a possible healed left nasal fracture.

Ancestry

The term ‘ancestry’ is used to describe the genetic background of individuals. An attempt was made to determine the ancestry of each individual based on the visual appearance of traits in the cranial skeleton, as described by Byers (2010, 154-165). A metric method was also applied based on eight cranial measurements (Giles and Elliot 1962 in Byers 2010, 168-171). Unfortunately, the expression of the various traits used to define ancestral groups can be ambiguous and assessing them is subjective; consequently, it can be very difficult to determine ancestry (Byers 2010, 152-154). Preservation is also an issue as most of the traits occur in the cranium, which may not survive intact. At the Newington Hotel a number of crania were complete, enabling observation and measurement (Keefe, in prep).

Based on visual assessment of the crania it was possible to assign 17.5% (11/63) of the adults to an ancestral group. Ancestry for the remaining 82.5% of the skeletons could not be determined due to absence of, or damage to, the cranium. Of the eleven individuals, all but one (10/11) were white or possibly white, while one individual (Skeleton 56) displayed a series of traits ascribed to African ancestry, including a hyperbolic palatal shape, nasal guttering, rectangular orbits and a prognathic dentition. The discriminate functions used to distinguish ‘whites, blacks and native Americans’ (Ubelaker 1989), however, suggested that the individual fell into the white range (Keefe, in prep).

Part of the interest in SK56 regards this individual’s ancestry, specifically the ambiguity between the indicators determined by the morphological traits and the metric analysis. In the first instance pointing towards African ancestry, where as the latter suggest the individual was Caucasian.

Further study concerning SK56 and broader implications

Two avenues of questioning are raised by the analysis undertaken on SK56 so far.

Firstly there is a temptation to see an interesting anomaly in the distribution pattern concerning ancestry in the cemetery population at the Newington Hotel. More broadly questions arise concerning diversity of origin in the population of Roman York, how its population became established, grew and its stability, also how trends in population fluctuation might be determined and understood. As a garrison town that grew into a significant administrative and commercial centre it is perhaps understandable to assume that significant elements of the city’s population would have been drawn in from various parts of the Empire. How might such a supposed influx balance with those drawn to York from its hinterland, regionally or from other parts of the British Isles? The scope of these questions is probably somewhat beyond what the population of the Newington Hotel cemetery can reveal, however it may be possible to make steps towards forming the basis of wider research into Eboracum’s demographics.

Stable isotope analysis has the potential to enhance our understanding of the origins of Roman York’s population. Isotope analysis can be used to indicate the possible place of childhood
residency. As such it may provide an indication of the where certain individuals originated. How to structure this assessment requires careful thought concerning how, what and why this sort of study might be of value or if indeed it is going to tell us anything meaningful beyond a mere snapshot. Rather than focussing on a single individual purely because the statistical and analytical methodologies are ambiguous in their outcome, consideration should be given to broadening the research to encompass a larger sample set in the hope that such analysis might expose more about diversity of origin, or indeed its lack (considering that ten of the eleven skulls assessed for ancestral traits indicate that they where white or possibly white). It might be this could be tied in with the larger than expected male to female ratio in the cemetery and what could be implied about the make–up of the population, for example work opportunities in an urban centre attracting a larger proportion of men.

How many individuals to chose and which skeletons to select for a sample study likely need careful consideration and may include factors such as, their sex, age at death, when they died. But also how do you arrive at a sample size that is meaningful and informative? It may simply be that there are clear limitations as to what we might achieve, although it may be sufficient to acknowledge those limitations with the study providing the basis for a broader program of research beyond that of the current study.

The second element highlighted by the ambiguity between the statistical and analytical methodologies employed in determining ancestry is that of the reliability of those methodologies themselves. What, if in any way might further research challenge and /or enhance the established methodologies?
This series of *Insights* has been contributed by York Archaeological Trust staff members and external specialists for Finding the Future. They aim to frame an understanding of aspects of the Trust’s collection of artefacts and their archaeological context; and also to enhance staff involvement. The authors represent a broad range of experience and knowledge.

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