MARGARET CLITHEROW: SKELETAL IDENTIFICATION OF AN HISTORICAL FIGURE?

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Summary

This paper describes the use of physical anthropological methods of analysis in attempting to identify an historical figure in England. The historical background to the examination is detailed and reasons for the belief that the skeletal remains excavated from the site were those of a named person, Margaret Clitherow, are discussed. Analysis of age, sex and manner of death indicated that the remains were not those of Margaret Clitherow.

\textit{Key words:} Osteology; Historical; Peine forte et dure

Introduction

The work of the human osteoarchaeologist has many uses but primarily in terms of describing the physical characteristics and life histories of past populations. The study of human remains in more modern contexts particularly in murder investigations by the police is commonplace in the United States \cite{1} but forensic anthropology is a relatively new discipline in the British Isles. There are, increasingly, instances emerging requiring the identification of skeletal remains believed to belong to certain individuals in history \cite{2}. The utilisation of anthropological methods currently exploited for the study of human remains from archaeological sites for determining aspects such as age, sex and physical characteristics of individuals is widely accepted \cite{3}. Furthermore, many of these methods of examination, particularly for ageing adult skeletons \cite[e.g.][]{4}, have been developed on relatively modern populations.

In 1988 the Calvin Wells Laboratory at the University of Bradford was contacted to solve a mystery, the identification of the skeletal remains from an individual believed to be Margaret Clitherow.

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Historical Background

The last person to suffer the penalty of 'peine dure et forte', being crushed to death under a door, was in fact Margaret Clitherow on Good Friday March 25th 1586. She was the recusant wife of John Clitherow, a butcher and later Lord Mayor of York, England and she had been charged with harbouring a priest to teach her children. She refused to plead lest her children be pressed to witness against her.

Highly regarded in York, her case became a 'cause celebre' and, lest she be revered as a martyr, the authorities buried her body secretly in a rubbish dump. Her friends searched for her remains and, after six weeks, recounted her discovery:

'Mrs Clitherow's body was buried beside a dunghill in the town where it lay full six weeks without putrefaction, at which time it was secretly taken up by Catholics and carried on horseback a long journey, to a place where it rested six days unbowedled, before necessary preservatives could be gotten, all which time it remained without corruption or evil savour and after was laid up as a worthy treasure until...it may be kept with due honour.' [5, page 99]

Over the last 50 years, the location of her remains has been the quest of historians. One tradition suggested Hazlewood Castle, the seat of the Vavasours, Mrs Vavasour having been a close friend of Margaret and at the very least her body may have rested there before being taken on to Catholic relatives in Lancahire. Another tradition suggested that the ruined Lady Chapel of Mount Grace may have been used for burial. This lies above Osmotherley in North Yorkshire, just below the Drover's road which traversed Meynell and Ingleby country. This little chapel and hermit cell belonged to the monastery below and has continued to be a centre of pilgrimage until today (Fig. 1).

In recent times both monastery and chapel were the property of Sir Hugh Bell of Ingleby Arncliffe and when the estate came up for sale in the 1950s, the ruined chapel and cottage were bought by the Eldon and Scrape families to become a family memorial, Archbishop Scrape having founded the monastery in 1399.

Before reconstruction commenced, a non-archaeological excavation was undertaken under the guidance of Kenneth Croft Andrew in 1954, County Archivist at Northallerton and under the west window within the chapel a single grave was found.

This contained two skeletons and, to quote from Andrew's impromptu note:

'At some time shortly after the desecration of the Chapel — say about 1550 — one corpse (A) had been buried in this grave, unshrouded so far as I can tell and without grave goods of any kind. Some years later, when probably its flesh had decayed, but its limb bones were still held together by their cartilages, that body was most irreverently, violently and hastily disinterred to make way for another, which had been prepared for burial in a very different fashion. Skeleton B with its arms extended along the sides outside the thighs, was shrouded... (and) was laid in an oaken coffin... ' [6, page 3].

Night was falling when the find was made, in May 1954 and no good photographs were taken; moreover, there were local people curious and the site was open, so the remains were lifted on to a door and taken into the cottage for the night, so that no detailed study of the undisturbed site was made.
The skeletal remains of both individuals were taken to Ampleforth Abbey and then to the Department of Anatomy, St. Bartholomew's Medical College, London where Professor A.J.E. Cave found Skeleton A to be that of a youngish male and Skeleton B, an older female (Fig. 2), the latter believed to be that of Margaret Clitherow. He wrote:

'Repeated detailed examination (was) made of the female skeleton B (the more complete of the two) to assess age of (the) individual at death. This, on the anatomical and pathological evidence of the bones, cannot be less than 40 years and is more probably 45–55 years, with an indeterminate upper limit.

The female skeleton B manifests some peculiarly masculine cranial characters, so that, by itself, the skull affords no unequivocal evidence as to sex of the individual.

The pelvis (happily complete) is certainly female, but extremely atypical. Obstetrically it is a 'small round pelvis' — the variety nowadays rendering Caesarian section the elective mode of delivery. Individual B — if a parous woman — must either have experienced great difficulty in childbirth or else have given birth to very small babies... highly inconsistent with the recorded obstetric history of the martyr.

The result of repeated and time-consuming examination of this skeleton will duly be composed in Report form'[7, page 2].

Cave's report was never actually written, nor was that of Andrew and the story is a chapter of mishandling by a church authority fearful of publicity. After the restoration of the Lady Chapel, the two skeletons were laid to rest in 1970 in sealed caskets, where they had been found.
Much historical material has since come to light and it seemed timely in 1988 to consider publishing the story in full and hence to re-examine the skeletons in the absence of any full reports by Andrew or Cave, both of whom are now deceased.

Material and Methods

Permission was obtained from the Home Office, London for re-examination of the two skeletons.

The skeletal remains of two adult individuals (A and B) were examined for age, sex, metrical characteristics and pathological features. Skeleton A was reasonably complete except for most of the vertebral column, hands and feet. Some of the long bones and ribs were fragmented and the skull vault consisted of many pieces. Skeleton B was more complete, only missing the right hand, most of the left and the majority of the foot bones. Methods of determining age and sex are as described in Krogman and Iscan [8].

Results

Age and sex

The characteristics used to indicate the sex of each individual are indicated in Tables 1 and 2.
### TABLE 1

**SKULL AND PELVIS: SEXUAL CHARACTERISTICS EXAMINED**

<table>
<thead>
<tr>
<th>Feature used</th>
<th>Sex</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Skeleton A</td>
</tr>
<tr>
<td><strong>Skull</strong></td>
<td></td>
</tr>
<tr>
<td>Supraorbital ridges</td>
<td>F (not prominent)</td>
</tr>
<tr>
<td>Orbital rims</td>
<td>F (sharp)</td>
</tr>
<tr>
<td>Chin</td>
<td>M (round)</td>
</tr>
<tr>
<td>Vault bossing</td>
<td>?</td>
</tr>
<tr>
<td>Nuchal crest</td>
<td>?</td>
</tr>
<tr>
<td>Zygomatic process root</td>
<td>M (crest present)</td>
</tr>
<tr>
<td>Mastoid process</td>
<td>M (large)</td>
</tr>
<tr>
<td><strong>Pelvis</strong></td>
<td></td>
</tr>
<tr>
<td>Sciatic notch</td>
<td>F (wide)</td>
</tr>
<tr>
<td>Subpubic angle</td>
<td>F (wide)</td>
</tr>
<tr>
<td>Iliac auricular surface</td>
<td>?</td>
</tr>
<tr>
<td>Pelvic outlet</td>
<td>?</td>
</tr>
<tr>
<td>Pre-auricular sulcus</td>
<td>M (absent)</td>
</tr>
<tr>
<td>Obturator foramen</td>
<td>M (oval)</td>
</tr>
<tr>
<td><strong>Sacrum</strong></td>
<td>?</td>
</tr>
</tbody>
</table>

In addition, it was felt that metrical analysis [3] may help in identifying the sex of the individual (Table 2) although on its own metrical analysis would not be recommended as a sexing method.

### TABLE 2

**METRICAL DATA USED FOR SEXING**

<table>
<thead>
<tr>
<th>Bone</th>
<th>Skeleton A</th>
<th>Skeleton B</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Femur</strong> [9]</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vert. diameter head</td>
<td>R: 47 mm (M)</td>
<td>L: 42 mm R:42 mm (?F)</td>
</tr>
<tr>
<td>Bicondylar width</td>
<td>R: 76 mm (?)</td>
<td>L:73 mm R:73 mm (?F)</td>
</tr>
<tr>
<td><strong>Scapula</strong> [10]</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Glenoid cavity length</td>
<td>L: 38 mm (M)</td>
<td>L: 36 mm (?)</td>
</tr>
<tr>
<td></td>
<td>R: 38 mm (M)</td>
<td>R: 36 mm (?)</td>
</tr>
<tr>
<td><strong>Sternum</strong> [3]</td>
<td>?</td>
<td>Body (143 mm) more than twice the length of manubrium(45 mm) M.</td>
</tr>
</tbody>
</table>

**Abbreviations:** M, male; F, female; ?F, female; ?, ? sex.
An additional feature noted in Skeleton B which may indicate sexual dimorphism, was a sternal foramen which has been noted to be twice as common in males as opposed to females [11].

It appears that from the features observed on both skeletons they are both male. In fact, Skeleton A was more problematical to sex than Skeleton B, the former having several morphological features both in the skull and pelvis attributable to females. Metrical data did not aid in sexing to any large extent; the sternum, however, was undoubtedly male based on many different authors' methods [e.g. 12,13].

As both skeletons were deemed male there seemed to be no reason to determine age. However, this analysis was pursued primarily with the aim of comparing results with Cave's work [7] and the documented age at death for Margaret Clitherow [14].

The application of methods of ageing adults to archaic skeletons is not without problems. Firstly, many methods have been developed on relatively modern skeletal collections, secondly some of the methods have been discovered to be subjective and inaccurate in their use, and thirdly several methods produce large age ranges for the older ages of individuals. Recent work on skeletons of known age from the Spitalfields 18th/19th century crypt from London [15] suggests that some methods of ageing are suspect as to whether they produce accurate useable data. It is with this in mind that as many ageing methods as possible were used including epiphyseal union [16], dental development and attrition [17], pubic symphyseal degeneration [4] and sternal ends of the ribs [18]. Both individuals were determined to be not more than 35 years of age at death or, alternatively, young adults. In addition, Skeleton B had osteophyte formation and porosity of some of the vertebral articular surfaces. It should be noted that spinal osteophytes can occur in individuals as early as the 3rd decade [19].

Cave [7] estimated Skeleton B, that believed to be Margaret Clitherow, to be over the age of 40 years at death and probably 45 - 55 years. From the latest examination of the skeletons from Mount Grace Lady Chapel it seems that both age and sex of Skeleton B does not agree with the observations made by Cave [7], but unfortunately the methods used by Cave to examine this skeleton are not stated in his brief letter. Margaret Clitherow's exact date of birth is not known but she married John Clitherow on the 1st July 1571 and the normal age for marriage at this time was about 15 years [14]. When she was pressed to death in 1586 she would have been around 30 years.

Manner of death

It was considered appropriate to attempt to identify the manner of death of both skeletons, particularly Skeleton B, by examining their skeletal remains.

The manner of death of Margaret Clitherow was 'peine forte et dure'. The penalty, as pronounced in the judgement of Judge Clench to Mrs Clitherow was to

'turn from whence you came and there, in the lowest part of the prison, be stripped naked and laid down, your back upon the ground and as much weight laid upon you as you are able to
bear and so continue 3 days without meat or drink, except a little barley bread and puddle water and the 3rd day to be pressed to death, your hands and feet tied to posts and a sharp stone under your back' [14, page 19].

The execution took place on March 25th 1586. Her ‘secret parts’ were covered with a habit of linen, the remainder of her body being naked and the door was laid upon her. Her hands were bound to posts so that her arms and body made a perfect cross. A sharp stone the size of a man’s fist was put under her back and weights of 7 or 8 hundredweight were placed upon the door. It is recorded that death occurred after 15 min, when her broken ribs ‘burst forth of the skin.’

An eyewitness account of the discovery of the body of Margaret Clitherow records that the breast, throat and face were disfigured with blood and that the body was all crushed. Therefore, death resulted from asphyxiation due to fracture of the rib cage and, no doubt, from intrathoracic haemorrhage.

Potential Skeletal Manifestations

It is suggested that the skeletal manifestations of the penalty could have been:

(i) multiple rib fractures probably occurring at the angle of the ribs;
(ii) sternoclavicular and acromioclavicular dislocation;
(iii) fracture of the spinous processes of the vertebrae at the site of placement of the stone.

In the examination of osteoarchaeological remains of suspected victims of peine forte et dure, only rib and spinous process fractures would potentially be detected. The clavicular joint disruptions, involving only the para-articular soft tissues, would not therefore be manifest in skeletal remains. In the case in question there was no convincing evidence of antemortem trauma to the spine or ribs. All the vertebrae were complete except for the missing (presumed postmortem) 7th cervical and 1st thoracic vertebrae. There were 11 complete left and 7 right ribs with 15 shaft fragments, the latter a common area for fragmentation to occur in archaic skeletal material. Antemortem fractures of the ribs tend to occur close to the rib angle at its maximum convexity [20]. It would be dangerous to suggest that these ribs had been fractured as a result of ‘peine forte et dure’. There are two obvious factors to bear in mind, that of the almost impossibility of ascertaining the difference in archaic material between fractures occurring only a short time before death and those occurring during burial. In both cases evidence for any healing would not be present or expected. During the fracture healing process there is usually continuity of granulation tissue between the two fracture fragments in a few weeks and union by primary callus in 2–3 months, with consolidation in 4–5 months [20]; obviously timing of healing will vary depending on many factors.

Discussion and Conclusions

One of the skeletons presented for examination was believed to be that of
Margaret Clitherow. Detailed anthropological analysis indicates that the skeleton is male on the basis of morphological and metrical features. In addition, there is no evidence to suggest that this individual’s death was by pressing. It appears that the elusive resting place of Margaret Clitherow remains to be found and that Skeleton B from Mount Grace Lady Chapel is unrelated to the incident of ‘pressing to death’ in 16th century York. The identity of the two skeletons is as yet unknown and the remains have now been reinterred following the guidelines of the Home Office license.

This study has highlighted the value of anthropological methods in human osteoarchaeology in the identification of apparently named and buried people in the past. Although they have not solved this mystery it has tested another possible theory on the final burial place of Margaret Clitherow.

Acknowledgements

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