Skeletal Material from the House of C Iulius Polybius in Pompeii, 79 AD

Among partly mixed collection of skeletal remains excavated in the house called “Casa di Polibio” skeletons of 13 individuals were re-assembled and identified. There were 3 adult males, 3 adult females of various ages, 4 boys, 1 girl, 1 child of unknown sex and one foetus in the last month of intrauterine life. The foetus was associated with the skeleton of a young (16-18 years) female whose bones are stained green-blue-black, probably by the jewellery or costume. Craniometric, odontometric, and osteometric data, together with reconstruction of stature are presented. Besides a mild case of torticollis in a young adult male no special pathologies were found. Enamel hypoplasia was frequent (87.5%). Presence of dental calculus on teeth of practically all individuals, frequent dental caries (63.6% of individuals), and moderate tooth wear indicate diet of well-cooked foods rich in carbohydrates. On grounds of age and biological characteristics it may be suggested that the group included older parents, their children, eldest son and his pregnant young wife plus a pair of domestics. Other possibilities include three adult couples: grandparents, parents and newlywed eldest daughter and her husband. Final resolution of family relationships must await full analysis of metric data and the DNA analysis. It seems that the group is representative of a Pompeian household: many children born approximately 3 years apart, early age at marriage, good food, relative freedom from disfiguring disease.

The skeletal material was discovered inside the house of C Iulius Polybius (Casa di Polibio) during the excavations that took place between 1966 and 1978. It represents a group of people who died in this particular house during the eruption of Vesuvius in 79 AD. The skeletons were found lying on the floor, or on beds, in several rooms of the house. The skeletal material was stored in a few boxes, each containing bones of more than one skeleton mixed together to a varying degree. Several bones, originally broken post-mortem, were glued together indicating that an attempt was made earlier to curate and study the material, but no substantial separation of bones belonging to particular individuals, nor extensive cleaning and curation were in evidence.

The first task was to assess the number of individuals and to re-assemble individual skeletons. This has been done by setting all bones from each box in anatomical order, estimating age and sex of each individual represented by the bones and, if necessary, joining together bones belonging to the same individual found in different boxes. Details of coloration of the bone tissue and characteristics of the matrix still adhering to the bones were of assistance in this task. About 90 % of material has been successfully separated into individual skeletons. Small bones, or small bone fragments, belonging to individuals of similar age were difficult to assign and they were left in original boxes. Each individual skeleton was placed into a separate
new box and given a new label. This label consisted of the number of the original box and a capital letter. For instance, the first skeleton identified in the box 2 was labelled “2 A”. These labels were also placed on skulls and some larger and more characteristic bone fragments. The exception was the foetal skeleton whose bones were placed in a paper envelope in the box of its presumed mother.

Altogether skeletons of 13 individuals were identified. One of them, the skeleton of an adolescent male, was partial - only the right femur, few vertebrae and the proximal epiphysis of a radius were present.

The majority of the material was preserved as large fragments of skulls, mandibles, long and short bones. In several cases complete skulls and long bones were preserved. Partial reconstruction of skulls was possible. Each skeleton, but the adolescent one described above, though fragmentary, had all parts of the body represented.

Due to the fragmentary state of preservation in the assessment of sex and age at death all possible indicators were used (Acsadi and Nemeskeri 1970, Krogman and Iscan 1986, Loth and Iscan 1994, Loth and Henneberg 1996a, 1996b), but the priority in sex assessment was given to pelvis and skull, while age assessment of adults relied heavily on the state of dentition, with pubic symphyses, auricular surfaces of ilia, cranial sutures and arthritic changes taken into account. Age of children and adolescents was estimated on grounds of dentition and the ossification of long bones. Sex of children has been assessed following unpublished observations of SR Loth regarding shape of the mental area of the mandible. Girls seem to have smoothly curved outline of the inferior margin of the mandibular corpus, while in boys this outline is trapezoidal due to the infero-anterior protrusion of the mental area. This shape difference is especially well visible when main axes of central incisors are at approximately 45 degrees to the observer’s line of vision. The method is about 75 % reliable.

All measurements of the crania and long bones were done following Martin’s technique (Martin and Sailer 1957). Craniometric dimensions are given in Table 1, measurements of long bones in Table 2. Stature of adults was reconstructed using the formulae of Trotter and Gleser (1952,1977) for Whites. In cases of individuals with the length of several bones measured the stature was estimated from formulae for combined lengths. Stature of children was estimated from the length of femoral diaphysis according to Stewart (Malinowski and Wolanski 1988).

Body size of a foetus was estimated from the diaphyseal length of long bones, and from the dimensions of scapulae and ilium according to standards produced by Pinneau, Balthazard and Fazekas and Kosa (Fazekas and Kosa 1978, Malinowski and Wolanski 1988).

Since it can be suspected that some of the skeletons may have belonged to the members of a single family observation of the presence of some epigenetic traits was conducted. The metopic suture, parietal foramina, additional bones in the cranial sutures are found commonly in the ancient populations of Southern Italy (Henneberg and Henneberg 1990, 1996, Henneberg et al. 1992) and are easily observed on fragmentary crania.

Dental analysis was conducted as in Henneberg and Henneberg (1996).