PIERRE-FRANÇOIS PUECH, BERNARD PUECH, FRANÇOIS CIANPARANI, GOTTFRIED TICHY

CUT MARKS ON THE SKULL OF WOLFGANG AMADEUS MOZART

ABSTRACT: The skull deposited at the Mozarteum in Salzburg, Austria, was exhumed in 1891 at the cemetery in Vienna (Le Charvier 1966). Superimposition and osteometrics have given evidence that craniofacial distinctiveness of the cranium is consistent with the portrait (Puech 1987; Puech and Puech 1988). Here we describe injuries to the skull sustained during life and after death.

KEYWORDS: Mozart Defleshing -- Burial -- Pathology.

DESCRIPTION

The skull has had its base sawn off (Fig. 1). It is possible to distinguish, on the outer bone surface, initial engraved saw lines, ill-followed. Parallel, two-centimeter-long impressed lines on the frontal's lateral side may have resulted from a vice used to maintain the skull during the operation (Fig. 4). Four small empty pits, drilled to hold the mandible with a steel wire, are present. The incisor crowns are broken off, the roots present in their sockets (Fig. 2). Scraping marks as well as cut marks have been detected on the cranial vault to force away delicate internal skull bones like the sphenoid and ethmoid (Fig. 7). Knife-notches have widened the nose opening (Fig. 3). The skull retains organic residues. A few bone surface irregularities can be seen, but no mark of root etching. Small vascular channels are present along a slight midline thickening of the frontal (Fig. 4). A linear fracture with signs of healing can be followed (Fig. 1, F), with an imprint of a clot on the internal table of the parietal. With scanning electron microscopy, fine parallel scratches on other crown surfaces (Fig. 5) are observed running bucco-lingually along the cervical portion of the distal faces of the canines (Fig. 6).

The skull was cleaned before the complete destruction of organic residues. The arrangement of the knife-notches around the nasal aperture margins, coupled with the missing sphenoid area and scraping marks, are indicative of manipulation that was not a simple defleshing. It could be the result of a procedure to obtain cleaned bones for preservation.

Ayril, the famous anatomist, has mentioned that he opened the skull-base parallel to the Frankfurt Horizontal plane, across the external acoustic meatus. The cranial base and mandible should be searched for in relevant anatomical collections.

The front teeth have been broken off by trauma induced in transport prior to or during burial. This is why our SEM analysis detected mineral, animal, and plant particles in the root canals (Figs. 7 and 8). The fine parallel scratches observed on the apparently smooth distal surfaces of the canines are typical of the habitual use of the toothpick. Traumatic lesions are frequent in skeletal finds. The linear fracture is the result of a fall. The calcified epidural hematoma imprint, associated with bone thinnings and excessively overlapping squamosal sutures, gives evidence of late complications initiated by a clot.

The small vascular channels, with reduction of the orbital dimensions, a low nasion-vertex chord, maximum frontal breadth index, and an anteriorly curved coronal...
**FIGURE 1.** Skull of Wolfgang Amadeus Mozart with a fracture to be followed on the left parietal. Skull base sawn off.

**FIGURE 2.** The incisors are broken off, the roots are present in their sockets.

**FIGURE 3.** Knife-notches have widened the nasal aperture.

**FIGURE 4.** Small vascular channels are present along a slight midline thickening of the frontal.

**FIGURE 5.** Perikymata with hypoplasia on the buccal surfaces of the teeth. The age-at-stress distribution derived from Goodman gives 2-3.5 and 4-6 years.

**FIGURE 6.** Polished surface and fine parallel scratches caused by toothpick use.

**FIGURE 7.** SEM analysis has detected mineral, animal and plant particles in the incisor root canals.
suture are diagnostic of a cranial dysmorphology (Puech and Puech 1988; Puech et al. 1989).

REFERENCES

Kiel, Christian Albrechts University.

Pierre-François Puech, Ph.D.
Bernard Puech
François Cianfarani
Gottfried Tichy
Institut de Médecine Légale
de Marseille
BP 191
30012 Nîmes, France