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Une reconstitution surprenante d'un fossile humain : la mandibule magdalénienne du crâne d'enfant Rochereil III

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Résumé

Le crâne et la mandibule d'un jeune enfant ont été découverts dans un niveau magdalénien de la grotte de Rochereil, Dordogne, France en 1939. Très fragmentés, ils ont été prélevés avec les sédiments environnants en un seul bloc, dégagés en laboratoire, puis reconstitués. La mandibule a été reconstituée de façon erronée. Si les trois molaires déciduales sont bien humaines et en place, en revanche, seule une des six dents du bloc incisivocanin, une deuxième incisive déciduale droite est humaine, mais positionnée à gauche. Les autres dents sont des incisives et canines de plusieurs jeunes rennes adultes. La confusion de ces dents animales, provenant vraisemblablement des sédiments environnants, avec des dents pathologiques d'enfant a été favorisée par l'existence de lésions pathologiques crânienne et mandibulaire. La possibilité de reconstitution aberrante avec confusion avec des restes animaux doit être systématiquement évoquée pour des fossiles restaurés dans le passé. ***Pour citer cet article : B. Mafart, C. R. Palevol 8 (2009).***

Abstract

A surprising reconstitution of a human fossil: The Magdalenian mandible of the child's skull Rochereil III. The fragmented pathological skull of a young child was discovered in a Magdalenian level in the Rochereil cave, Dordogne, France, in 1939. The bony fragments were extracted along with the surrounding soil, and completely cleaned in a laboratory. The mandible has been wrongly reconstructed. Among the nine teeth that are present on the mandible, three deciduous molars are human teeth at their correct places. Only one tooth in the incisor–canine block (the right deciduous lateral incisor) is a human tooth, but it is incorrectly positioned on the left side. The other incisors and canines implanted in this child's mandible originated from one or several young adult reindeer. These small animal teeth were probably mistaken for human pathological teeth because the child's skull and mandible showed several pathological lesions. The possibility of faulty reconstitution must be systematically considered when dealing with for all human fossils which have been discovered in the past. ***To cite this article: B. Mafart, C. R. Palevol 8 (2009).***

Mots clés : Mandibule ; Enfant ; Reconstitution ; Paléopathologie ; Renne ; Préhistoire

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Abridged English version

The fragmented skull of a child was discovered in 1939 in the Rochereil cave, near Grand-Brassac, in the department of Dordogne, France [2]. The skull and the mandible were crushed, and the bony fragments were extracted along with the surrounding soil before being completely cleaned in a laboratory. The presence of a wide circular opening present in the frontal bone was initially attributed to a postmortem endocranial trepanation, and the child was assumed to have died of hydrocephaly [5]. However, a recent examination of the cranium showed that the frontal opening was a pathological lesion and did not result from a trepanation; the diagnostic of hydrocephaly was therefore incorrect because the skull had been wrongly reconstructed. The cranial lacuna was actually associated with a mandibular lacuna. Several possible etiologies can be proposed for these complex pathological lesions [4].

The mandible was also poorly reconstructed. Among the nine teeth present on the mandible (Fig. 1), three deciduous molars were of human origin and in their right positions; only one of the six teeth in the incisor–canine block was human. However, this right deciduous mandibular lateral incisor has been wrongly placed on the left side. The other incisors and canines implanted in this child's mandible originated from several young adult reindeers (*Rangifer tarandus*).

History of the discovery and first reconstructions of the fossil

The Rochereil cave was excavated by P. Jude, who identified two anthropic levels, i.e. Magdalenian and Azilian, without an intermediate sterile level [2]. On 3 April 1939, he discovered the child's cranium and mandible, labelled Rochereil III. Some other human remains had been previously discovered at the Azilian level. In his description of the circumstances in which the skull was discovered, Jude suggested the possibility that a fossa may have been dug into the Magdalenian level ([2], p. 42). This fossil may, therefore, be more recent than the archeostratigraphic level in which it was found. The recent radiocarbon dating studies of this skull (11,255 ± 50 LP, OxA-16932), corresponds to the Pleistocene/Holocene transitional period, but the exact cultural period from which this skull originated cannot be determined —Magdalenian or Azilian. A fresh overall analysis of the archeological material, archeostratigraphic data and other human remains of Rochereil cave should help to specify this important point for the knowledge of Magdalenian funeral practices.

Since the skull had been completely crushed to fragments, it was extracted along with the surrounding soil. The initial reconstruction of the human remains was carried out by the wife of H.V. Vallois ([2], p. 44). Ten years later, the skull was disassembled during its transportation to Paris and was reconstructed a second time by an unknown collaborator of H.V. Vallois [5]. Some missing parts of the cranium and of the mandible were restored in 1939 and 1949 using adhesive cement. On study of this fossil, H.V. Vallois briefly described the mandible. However, he did not identify the substitution of several of this child's mandibular teeth with reindeer teeth, but simply observed that the canines were exceptionally small. Since this was a pathological skull and mandible, the abnormal teeth were assumed to be dysmorphic [4,5].

Morphological study of the mandible and teeth

There are now nine teeth in the mandible: three molars, two canines and four incisors (Figs. 1–3). X-ray studies were performed to examine the dental buds (Fig. 4). The teeth were named according to their present anatomical positions on the mandible.

Molar area

The right deciduous first molar was a human tooth with a strong *tuberculum molare* on the mesiovestibular angle of the crown. The right deciduous second molar had a normal human morphology. The wear was limited to the enamel on the cusps. The crown of the first permanent molar was attached to the bone behind the roots of the right deciduous second molar. There were no dental buds under the roots of the two deciduous molars, or/and behind the first permanent molar crown.

The left deciduous second molar, which was the only remaining molar on this side, showed a normal morphology. The left side of the mandible from this tooth to the canine and the cavity of the permanent first molar bud had been reconstructed and filled in with adhesive cement.

Incisor–canine block

The incisors and canines were morphologically heterogenous (Figs. 2 and 3). Only one tooth in this dental area was human. The other five teeth were small and brachyodontal with a thick layer of enamel, and an irregular surface. These features are typical of reindeer's teeth (*Rangifer tarandus*).

The tooth replacing the position of the right central incisor was an adult reindeer's left central incisor. The vestibular face was convex, and the lingual crown face was concave and had a ridge**.** The occlusal edge of this