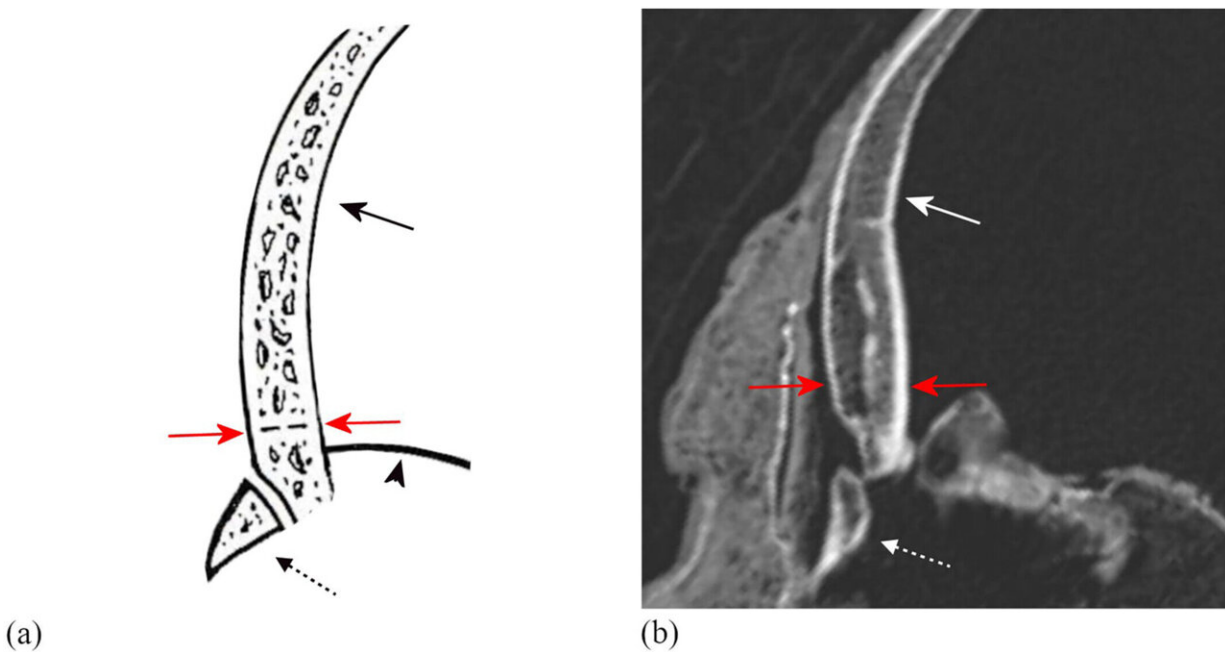


Anemia found to be common in ancient mummified Egyptian children

April 18 2023, by Bob Yirka



Measurement of the cranial vault thickness of the frontal bone. (a) Schematic drawing according to Ebel illustrating the measurement (red arrows) of the frontal bone (arrows) above the nasal bone (dotted arrows) and orbital roof (arrowhead) on x-rays (Ebel et al., 1995). (b) Exemplary median multiplanar CT reconstruction of case 12 with measurement. Credit: *International Journal of Osteoarchaeology* (2023). DOI: 10.1002/oa.3227

A team of paleopathologists and medical experts from Germany, the U.S. and Italy has found that anemia was common in ancient Egyptian

children who had been mummified. In their study, reported in the *International Journal of Osteoarcheology*, the group subjected multiple mummified remains of children from ancient Egypt to computed tomography scans to study their skeletons.

The research team focused their efforts on children from that time that had died before reaching adulthood and who had then been mummified. Mummifying the children allowed their remains to be preserved in ways not possible with those who were simply buried. But modern study does not allow unwrapping the dressings used in the [mummification process](#); thus, researchers have to use modern machines to peer through the dressings to learn more about what is inside.

In this new effort, the researchers ran full-body CT scans on 21 child mummies (between the ages of 1 and 14) in order to study the entire skeleton. In so doing, they found evidence of pathological enlargement of the cranial vault—the part of the skull that holds the brain—in seven of the children. Such enlargement is typically associated with anemia.

Anemia is generally caused by malnutrition. It leads to reduction in production of red blood cells, which means that not enough oxygen can be carried to the brain and other parts of the body including the bones. Those with anemia also typically suffer from other problems, as well, such as [iron deficiency](#), bleeding in the [gastrointestinal tract](#), inflammation and chronic infections due to a weakened immune system. It was not possible to tell from the CT scans if [anemia](#) contributed to the deaths of the children, but the research team suggests it was, at the very least, a contributing factor.

The team also found a child who had suffered from thalassemia, in which the body cannot produce hemoglobin, and who also had an enlarged tongue. That child lived less than a year, almost certainly succumbing to the many symptoms associated with the disorder.

More information: Stephanie Panzer et al, Anemias in ancient Egyptian child mummies: Computed tomography investigations in European museums, *International Journal of Osteoarchaeology* (2023).
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