

## Richard III Remains

How does this information relate to our course?

The information relates to our course double pronged. It not only dealt with the anatomy of the skull, but also about dentition. Having excavating and confirming that it was Richard III remains, archeologists were able to determined how he died in battle, and eliminated that his medical issue [scoliosis] was not a significant contributor to his ultimate demise. The king received a total of eleven injuries, inflicted from various weapons through out his body. Significant trauma was sustained in cranial and facial region. Wounds to the facial bones, on the right side, involved the infraorbital rim, zygomatic bone the nasal bone, the maxilla and the mandible, possible indicating an assault with a linear weapon possible a sword. This injuries though significant were not necessarily life threatening. Those sustained on the cranium was another matter; injuries are inflicted from a superior, posterior position, the parietal bones, had holes/stabs perforating the bone, lateral indentation that didn't illicit immediate death. The occipital regions did, it had the most trauma; two wounds are noted, each lateral to the foreman magnum, where a large portion of the bones were sliced off; that surly was the death stroke.

In the dentition, being the hardest structure in the body, and embedded within the bone; capsulated and preserves intact DNA. What however was noticeable missing were a number of posterior molars both upper, but more on the lower. One of the upper incisor edge and lower anteriors had noticeable attrition. An isotope analysis was used to ascertained the type of ancient diet that the wealthy monarch consumed within a time frame. It suggests, large copious amount of protein, nitrogen and wine consumption [no water] which were registered, and impacted the overall health including his dentitions, along with limited oral hygiene [just gaining momentum

within that era]. Attrition caused by grinding of the teeth may be stress related, being a king, but also his diet was implicated, though not as severe as the common folks who subsisted on coarse grain. Interestingly however those of lower social status had less caries due to limited access to sugary delicacies that those of the upper class indulged in, resulting in a high rate of tooth decay within that class.

1. Did the knowledge you've gained so far in DEN1112 help you in understanding this material? What was new?

The knowledge gained thus far enabled me to watch/observe from a biologic/scientific perspective. Understanding the regions involved and their implication. I was able to identify specific anatomical regions of the skull; knowing what bones and dentitions were involved. What was new, is that carbon dating embedded within his bones and teeth were so accurate in determining the precise time that the king's diet changed, including where he lived.

2. What particularly was most interesting to you?

What was of interest to me was a supplemental article [ie. linked] written by the British Dental Journal [BDJ] about mineralized deposits of tartar that were built up over time, that are/were capable of surviving thousands of years of within which, were fossilized bacteria that lived in the king's mouth while he was alive. This illustrated how strong the component of tartar is, [literally like bones] as it is able to remain intact/adhere to the tooth surface forever if not physically de-bribed.

REFERENCES:

<https://www.youtube.com/watch?v=t6S0ku1R9nE>

<https://www.youtube.com/watch?v=mfi6gOX0Nf4>

<http://www.nytimes.com/2014/08/26/science/richard-iiis-rich-diet-of-fish-andexotic-birds.html>

<https://doi.org/10.1038/sj.bdj.2013.378>