Stone-age dental filling identified

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SAN FRANCISCO, USA: A team of Italian and Australian researchers appears to have found physical proof that restorative dentistry dates to the Stone Age. The researchers identified traces of a dental filling made of beeswax in a Neolithic human tooth discovered in Slovenia, and they are saying it may be the “earliest known direct evidence of [a] therapeutic-palliative dental filling.”

The researchers listed several previously known examples of ancient dentistry but said there was no known published documentation of the use of “therapeutic palliative substance in prehistoric dentistry.” The research team also referenced documentation on the use of ancient dental therapeutic practices, the finding of a human partial mandible associated with contemporary beeswax, covering the occlusal surface of a canine, could represent a possible case of therapeutic use of beeswax during the Neolithic.

“The tooth probably became very sensitive, limiting the functionality of the jaw during occlusion. The occlusal surface could have been filled with beeswax in an attempt to reduce the pain by sealing exposed dentin tubules and the fracture from changes in osmotic pressure (as occurs on contact with sugar) and temperature (hot or cold relative to the oral cavity),” the team wrote.

The piece of jawbone with five teeth still attached was discovered long before the team’s research was conducted. It was excavated from a cave wall near the village of Loche, Istria, in Slovenia and was initially dated to an age range of 6,445–6,400 years Before Present and the filling, 6,045–6,440 years BP.

The research findings were published Sept. 19 in PLoS ONE, the peer-reviewed, open-access journal, accessible online at www.plosone.org.

The team acknowledges in its paper that it cannot be absolutely certain that the beeswax filling was placed in the tooth in an effort to address a dental problem the individual was experiencing while alive. But the paper identifies that as being the most likely of the possible scenarios that would explain the presence of the substance on a worn-down tooth that otherwise would have had exposed dentin.

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