



Ritual drug use during Inca human sacrifices on Ampato mountain (Peru): Results of a toxicological analysis

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Highlights

- The victims chewed coca leaves.
- The victims were intoxicated by *ayahuasca* (*Banisteriopsis caapi*).
- The consumption of the *ayahuasca* could have been related to divination.
- The Incas may have consciously used of the antidepression properties of *ayahuasca*.

Abstract

Hallucinogenic plants and psychotropic stimulants performed an important role in the beliefs, rituals and divination practices in the ancient Andes. The aim of this article is to present the results of toxicological studies of two individuals immolated over 500 years ago during a *capacocha* ritual on the mountain of Ampato mountain in southern Peru. The *capacocha* was one

of the most significant ceremonies carried out in the Inca Empire. During the ritual, the Incas sacrificed children and young women who were supposed to be beautiful and unblemished.

The hair and nails of two Ampato mummies were examined using LC-MS/MS for the presence of coca alkaloids and metabolites (cocaine, benzoylecgonine, cocaethylene), mescaline, tryptamine, harmaline and harmine. The results of the study show that during the last weeks of the victims' lives, they chewed on coca leaves and were intoxicated by *ayahuasca*, a beverage made primarily from the *Banisteriopsis caapi*. In modern medicine, the properties of harmine led to the use of *ayahuasca* in the treatment of depression. Chroniclers mentioned the importance of the victims' moods. The Incas may have consciously used the antidepressant properties of *Banisteriopsis caapi* to reduce the anxiety and depressive states of the victims.

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Keywords

Incas; Capacocha; Human sacrifice; Ayahuasca; Coca

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