



D4 Buffy the Vampire Slayer: But How Much Force Did She Need?

*Sarah V. Hainsworth, PhD**, Aston University, Birmingham B4 7RT, UNITED KINGDOM; *Patrick H. Geoghegan, PhD*, Aston University, School of Life & Health Sciences, Birmingham B4 7ET, UNITED KINGDOM

Learning Overview: After attending this presentation, attendees will understand how stakes were used in history in deviant burials to prevent corpses from rising from the grave or to inflict postmortem punishment. Attendees will also understand what materials were used in staking and what forces are required for staking bodies.

Impact on the Forensic Science Community: This presentation will impact the forensic science community by demonstrating how stakings were performed and the factors affecting the choice of stakes and staking methodologies.

Staking of bodies was used in medieval times, particularly in southern Slavic regions, to prevent corpses rising from the grave. The process of decomposition of bodies was poorly understood and exhumed bodies were considered unnatural if they had not decayed or were apparently fatter than when alive. Thus, staking of bodies was ritually used to prevent vampire epidemics.

The practice of staking was also found at sites of “deviant burials” where the corpse was treated in a ritual way. The corpses typically belonged to criminals or blasphemers or those that didn’t fit in with society. The earliest evidence for staking was from Dolné Věstonice in Moravia (dating from 25,000 BC) where a thick wooden pole went through the thigh. Staking was also seen for an Iron Age bog body in Ireland dating from c362–175 BC, where the upper arms were pierced with a sharp implement and hazel rods were inserted. A coffin found in Metholoni, Greece, contained an adult male nailed to the coffin with metal spikes.

In the 1950s, a 6th-century skeleton was found near an ancient church site in Southwell, Nottinghamshire, United Kingdom. The remains had been ritually staked. Iron nails were used to pierce the shoulders, heart, and ankles, and the body was in unhallowed, swampy ground outside the churchyard. In the United Kingdom, suicides were buried with a stake through their heart until an Act of Parliament abolished the practice in 1823. Suicides were considered to be guilty of *felo de se*, crime against the self. The bodies were taken and buried at rural crossroads. Suicide remained a crime in the United Kingdom until 1961.

This work examines the stakes that have been found in a variety of archaeological digs, and from complementary museum exhibits, and considers how much force would have been required to drive the stakes into the corpse and pin the bodies to the ground. Stakes that were used in these types of rituals were typically either iron or wood; 2cm-diameter, 14cm-long iron nails have been retrieved from digs in Bulgaria. Wooden stakes were typically made from ash, hawthorn, or juniper, and were larger, with dimensions approximately 30cm long by 3.5cm diameter.

Several stakes of differing materials have been manufactured and drop testing has been used to measure the force required to drive the stakes through a body by testing with a foam-silicone, rubber skin-simulant system. More slender stakes with higher cone angles at the tip penetrate the skin-simulant system more readily, while larger stakes with shallower cone angles require more force to penetrate.

This work provides insights into ways in which these ritual burials would have occurred.

Staking, Forces, Penetration Resistance