

Bioarcheological and Biocultural Evidence for the New England Vampire Folk Belief

Paul S. Sledzik and Nicholas Bellantoni (1994)

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Many cultures have developed folk beliefs to explain the natural phenomena associated with death and disease (Aries, 1981). The folk belief in vampires, found in many cultures, incorporates interpretations of death and disease. The vampire image found in contemporary Euroamerican culture is based solely on Bram Stoker's *Dracula* (1883), an image that varies significantly from historic European and American vampiric folk beliefs. Eighteenth century European peasants believed that the appearance of the vampire in the grave (i.e., bloated chest, long fingernails, and blood draining from the mouth) meant that the vampire was draining life from the living. We now know these changes to be the result of postmortem decomposition (Barber, 1988; Mann et al., 1990; Micozzi, 1992). Further, the high number of deaths resulting from disease epidemics were also blamed on vampires. To stop the epidemic, vampires were sought out and "killed" by various methods (Perkowski, 1989). The term *vampirism* has also entered the psychiatric literature to explain pathologic behaviors similar to those of the mythical vampire, particularly ingestion of blood and necrophagic and cannibalistic activities (McCully, 1964; Prins, 1984; Vanden Bergh and Kelly, 1964). The clinical manifestation of erythropoietic protoporphyria, also known as Gunther's Disease, and its variants have also been cited as an explanation for the vampire belief (Prins, 1985). This autosomal dominant disorder causes increased excretion of protoporphyrin and results in redness of the eyes and skin, a receding of the upper lip, and cracking of the skin when exposed to sunlight.

American vampire folk beliefs, which were particularly strong in 19th century New England, contained some European features. The New England folklore is consistent in its incorporation of tuberculosis and examination of the body of the vampire for putative signs of life. Following the death of a family member from consumption (i.e., tuberculosis), other family members began to show the signs of tuberculosis infection. According to the New England folk belief, the "wasting away" of these family members was attributed to the recently deceased consumptive, who returned from the dead as a vampire to drain the life from the surviving relatives. The apotropaic remedy used to kill the vampire was to exhume the body of the supposed vampire and, if the body was un-decomposed, remove and burn the blood-filled heart or the entire body.

It stands to reason that the bioarcheological evidence of the vampire belief should be located in 19th century New England cemeteries. This report presents the analysis and interpretation of the grave of a supposed vampire from 19th century Connecticut, emphasizing the effect of the vampire folk belief on the bioarcheological record. This report also shows the importance of using historic documentation in the interpretation of skeletal information (Owsley, 1990; Sledzik and Moore-Jansen, 1991).

SKELETAL EVIDENCE

The Walton Cemetery, Griswold, Connecticut, an abandoned 18th-19th century Euroamerican rural farm family burial ground, was discovered eroding out of an operating, privately owned sand and gravel business in November 1990. Unfortunately, the instability of the sand and gravel knoll precluded in situ preservation and necessitated archeological removal of all remaining burials. The skeletal remains of 29 individuals (15 subadults, 6 adult males, and 8 adult females) were excavated in the course of 1 year. Documentary evidence in land deeds indicated that the Walton family, who had emigrated to Griswold in 1690, had utilized the knoll as a family burial ground by the 1750s.

The pathological conditions observed in the burials from the Walton Cemetery reflect lives of physical labor, including osteoarthritis and an unhealed femoral neck fracture in an elderly female. One case of particularly heavy dental calculus was observed.

The complete skeleton of a 50- to 55-year-old male interred in a stone-lined grave is of particular interest for this report. Two observations regarding this skeleton are of note: 1) the postmortem rearrangement of the skeletal remains, and 2) paleopathological evidence of a probable pulmonary tuberculosis infection.

Upon opening the grave, the skull and femora were found in a "skull and crossbones" orientation on top of the ribs and vertebrae, which were also found in disarray. On the coffin lid, an arrangement of tacks spelled the initials "JB-55",

presumably the initials and age at death of this individual.

Pathological conditions evident in this skeleton included healed fractures and active infectious processes. Healed fractures were observed on the lateral half of the right clavicle (with a bony callus extending to the scapula), the right eighth rib, and the left second rib. Mild osteoarthritis was seen in most large joints and most lower vertebrae. Some lower vertebrae also exhibited Schmorl's nodes. The articular surface of the left femoral medial condyle presented an area of crenulated bone 30 mm in diameter, probably traumatic in origin. Focal lytic activity had destroyed an area of bone approximately 40 mm in diameter at the articulations of the left metatarsals and cuneiforms. Periostitis was present on the distal half of the left tibia and the distal two thirds of the left fibula. Periostatic lesions of the left second, third, and fourth ribs were also observed. These lesions were whitish-gray and pitted in appearance, and were located on the visceral rib surface near the rib head adjacent to the pleura. The lesions, respectively 30 mm, 35 mm, and 25 mm in length, comprise an area of approximately 30 cm mediolaterally and 45 cm superiorly-inferiorly when considered in anatomical position. The lesions are similar to those described by Kelley and Micozzi (1984) as most likely being associated with primary pulmonary tuberculosis.

Differential diagnoses for rib lesions include typhoid, pyogenic osteomyelitis, syphilis, pleuritis, and other types of non-specific chronic respiratory disease (Kelley and Micozzi, 1984). If the rib and foot lesions are taken as one entity, an additional differential diagnosis is blastomycosis, although this fungus is not normally found in Connecticut (Mann and Murphy, 1990). Periostitic reaction resulting from the fracture of the left second rib can be ruled out because the healed fracture shows no osseous activity around the fracture site, which is located 11 cm from the lesion.

Regardless of the specific infectious etiology of pulmonary disease in this individual, symptoms of a chronic pulmonary infection severe enough to induce rib lesions would have probably included coughing, expectoration of mucous, and aches and pains of the chest. Such symptoms, if not actually caused by pulmonary tuberculosis, would likely have been interpreted as consumption by 19th century rural New Englanders.

No other cases of tuberculosis were noted in the remains from the cemetery. Two burials are believed to be related to "JB." Both burials, a 45- to 55-year-old female and a 13- to 14-year-old subadult, were buried in a manner similar to "JB" and had the initials "IB-45" and "NB-13" spelled, respectively, in tacks on the coffin lid.

THE VAMPIRE BELIEF

To date, 12 historic accounts documenting vampire beliefs and activities in 18th and 19th century New England have been located ([Table 1](#)). These accounts are found in southern and western Rhode Island, central-southern Vermont, southeastern Massachusetts, and eastern Connecticut, and range in time from the late 1700s to the late 1800s. Eleven of the 12 accounts denote consumption as the cause of death of the vampire and any deceased relatives.

The New England vampire belief is based on a folk interpretation of the physical appearance of the tuberculosis victim and the transmission of tuberculosis. As the name *consumption* implies, the disease caused sufferers to "waste away" and "lose flesh," despite the fact that they remained active, desirous of sustenance, and maintained a fierce will to live (Brown, 1941). This dichotomy of desire and "wasting away" is reflected in the vampire folk belief: The vampire's desire for "food" forces it to feed off living relatives, who suffer a similar "wasting away."

The vampire folklore tradition is also consistent with modern knowledge of the transmission of tuberculosis. Many of the historic accounts indicate that family members living in close association became infected with the disease before or soon after the death of the "vampire." Tuberculosis is notorious for being transmitted between individuals of different generations living under crowded conditions, a situation common in rural 19th century New England farming communities (Hawke, 1988). Seasonal periods of low nutrition and the unsanitary conditions of 18th and 19th century farming compounds increased the opportunity for transmission of tuberculosis between family members (Clark et al., 1987; Kelley and Eisenberg, 1987). Although there is no evidence of tuberculosis in the remaining Walton cemetery skeletons, an 1801 narrative of Griswold history indicates that during the 25 years preceding the account "consumptions have proved to be mortal to a number" (Phillips, 1929).

KILLING THE VAMPIRE

The method of dispatching a vampire, also known as an apotropaic remedy, centers around the destruction of the vampire's body. In the New England folklore, if blood is found in the heart of the exhumed vampire, the apotropaic remedy was to burn the heart, in the process ridding the family of the vampire's actions. Most historic accounts indicate that upon exhuming the vampire, the body was found undecomposed and that blood was present in the heart. Barber's (1988) examination of the vampire belief in Europe indicates that the appearance of a vampire in the grave (i.e., bloating, hair and fingernails growing after death, the evidence of "blood" in the heart and chest) is attributable to the process of postmortem decomposition.

In the present case, however, the action is focused on the skeletal remains. Taphonomically, the physical arrangement of the

skeletal remains in the grave indicates that no soft tissue had been present at the time of rearrangement; no heart remained in the body. We hypothesize that, in the absence of a heart to be burned, the apotropaic remedy was the place the bones in a "skull and crossbones" arrangement. In support of this hypothesis, we note that decapitation was a common European method of dispatching a dead vampire, and that the Celts and Neolithic Egyptians were known to separate the head from the body, supposedly to prevent the dead from doing harm (Barber, 1988).

HISTORICAL EVIDENCE

The final piece of evidence is this historic newspaper account (Wright, 1973): "In the May 20, 1854 issue of the Norwich (Connecticut) Courier, there is an account of an incident that occurred at Jewett [City], a city in that vicinity. About eight years previously, Horace Ray of Griswold had died of consumption. Afterwards, two of his children--grown-up sons--died of the same disease, the last one dying about 1852. Not long before the date of the newspaper the same fatal disease had seized another son, whereupon it was determined to exhume the bodies of the two brothers and burn them, because the dead were supposed to feed upon the living; and so long as the dead body in the grave remained undecomposed, either wholly or in part, the surviving members of the family must continue to furnish substance on which the dead body could feed. Acting under the influence of this strange superstition, the family and friends of the deceased proceeded to the burial ground on June 8, 1854, dug up the bodies of the deceased brothers, and burned them on the spot."

This account places the vampire belief in the Jewett City/Griswold area just after the time span of the Griswold cemetery. The excellent preservation of the vampire skeleton indicates that it was probably buried toward the latter time period for the cemetery (ca. 1800-1840), thus placing the internment of this individual close to the time of the above account. The town of Griswold was settled just after 1812, in part by emigrants from Western Rhode Island, who were, according to local tradition, uneducated and "vicious" (Phillips, 1929). Note in Table 1 that several vampire accounts are also located in Western Rhode Island. The Rhode Island belief was examined by Stetson (1898), who relates that the Rhode Islanders he interviewed did not consider their practice to be vampirism but rather believed it was a way to protect living relatives from potential vampiristic actions of a deceased consumptive.

CONCLUSIONS

We present the following explanation for the bioarcheological and paleopathological evidence found in the grave in the Walton Cemetery. An adult male (J.B.) died of either tuberculosis or a pulmonary infection interpreted as tuberculosis (consumption) by his family. Several years after the burial, one or more of his family members contracted tuberculosis. They attributed their disease to the fact that J.B. had returned from the dead to "feed" upon them. To stop the progress of their disease, the body of the consumptive J.B. was exhumed so that the heart could be burned. Upon opening the grave, the family saw that the heart had decomposed. With no heart to burn, the bones of the chest were disrupted and the skull femora placed in a "skull and crossbones" position. This interpretation is based on three pieces of evidence: 1) the postmortem rearrangement of skeletal elements; 2) paleopathological evidence of tuberculosis or a chronic pulmonary infection producing similar physical manifestations; and 3) an historical account of the vampire folk belief from the same time and place as the skeleton under examination.

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