

CHILD SACRIFICE IN TULA: A BIOARCHAEOLOGICAL STUDY

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Abstract

Recent salvage excavations conducted in the Early Postclassic city of Tula, Hidalgo, exposed a residential compound containing an open patio, beneath which was discovered a massive burial, designated Feature 5. Human remains involving a minimum of 49 individuals were discovered, many of whom were arranged in a sitting or squatting position. The majority of individuals, including all of the latter, were young children. The bioarchaeological analysis suggests that they were sacrificed. Many individuals exhibited anthropogenic modification, including cut marks on the skull and postcranial skeleton, indicating the children had been flayed. Some individuals were represented only by the skull and cervical vertebrae, suggesting decapitation. The individuals appeared to be in bad health, a common attribute of children sacrificed to Tlaloc by the Aztecs. According to ethnohistorical sources, children offered to Tlaloc commonly had their throats slit, although this practice was not identified among the individuals in Feature 5, possibly owing to their young age. Sacrifice also may have been made to Xipe Totec, as suggested by the evidence of flaying and the presence of a large hollow sculpture of the deity located in an adjacent residential compound, a deity who has been also linked to human sacrifice related to regeneration and fertility.

INTRODUCTION

Human sacrifice in past societies is inferred through examination of the specific archaeological contexts harboring human remains, such as the initial construction or modification of buildings where sacrifice was part of the consecration of these activities (Cook de Leonard 1971; Jarquín and Martínez 1991; López Luján et al. 2010; Rattray 1992; Sugiyama 2005, 2010). Generally, mortuary contexts with simultaneous multiple primary interments are assumed to indicate the practice of sacrifice, since they were part of the same event of ritual violence (Pereira 2007:92). These circumstances suggest unnatural deaths, such as the sacrifice of companions to accompany a central figure in death (Harrison 1999:59; Martin and Grube 2000:53; Ruz 1968), although these burials are not guaranteed to be victims of sacrifice—an alternative interpretation is the reuse of tombs (Ducan 2011; Tiesler 2007:15–17; Weiss–Krejci 2003:373–374).

The human body is itself an indicator of sacrifice, providing palpable skeletal evidence of this practice with the perimortem and post mortem violence that permit its detection. Taphonomic study involves the observation of perimortem traumas, cut marks, and exposure to fire (Pijoan and Mansilla 1997; Tiesler 2007; Turner and Turner 1999). Even biological data, including age and sex of the individuals involved, provide information about the ritual performed, an example of which is the sacrifice of war captives by the Aztecs, where men were offered in rituals dedicated to certain deities, including Huitzilopochtli, god of war and god of the sun, and Xipe Totec, “our flayed lord” (González 2016:23; Sahagún 1829:bk. 1, pp. 51–52), or the rituals dedicated to Tlaloc (rain

god) to whom children were offered (Durán 1880:136–139; Motolinía 1967:63; Sahagún 1829:bk. 1, pp. 50, 84–86).

Various authors have noted that ritual infanticide is present throughout time in different societies across the world (e.g., Benson 2001; Bourget 2001; Hughes 1991; Klaus 2001; Palkovich 2012; Tung and Knudson 2010; Verano 2001). In Mesoamerica, child sacrifice is a well-known practice, although there is currently no knowledge about the possible role of children in Toltec rituals.

The present study concerns the discovery of a massive deposit of human remains at the Early Postclassic city of Tula approximately one kilometer from Tula Grande, the city’s sacred precinct (Figure 1), involving at least 49 individuals, most of whom were children, buried in a seated position. Designated Feature 5, the deposit underlay the open patio and altar near a sculpture of Xipe Totec buried in a neighboring compound. The first objective of this study was to determine biological characteristics of the individuals: age, sex, and health conditions. Due to the characteristics of the archaeological context, the hypothesis proposes the 49 individuals were the result of ritual sacrifice that does not correspond to Toltec funerary customs. I believe there is a link between Feature 5 and the nearby sculpture of Xipe Totec.

HUMAN SACRIFICE IN CENTRAL MEXICO

When the Spanish arrived in Mesoamerica, one of the aspects that most surprised and shocked them was the practice of human sacrifice. This practice, which has a highly religious significance, represents ritual death to obtain a benefit from the deities (Broda 1971; López Austin and López Luján 2008:145), thus establishing an intimate relationship with the supernatural (González Torres 1994:39)

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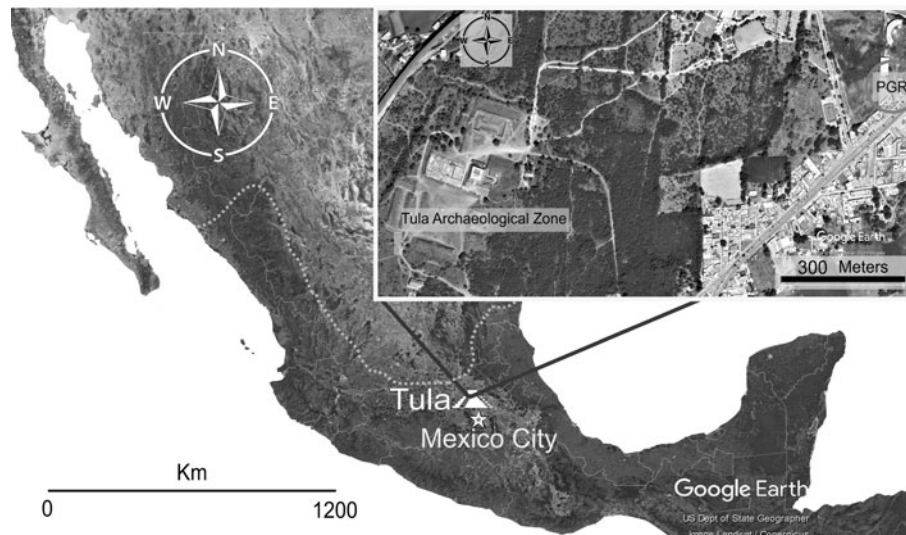


Figure 1. Location of Tula Archaeological Zone and Procuraduría General de la República (PGR) locality. Image from Google Earth.

as well as satisfying political, economic, and military ends (Boone 1984; González Torres 2010:402; López Austin and López Luján 2008:146). The practice also is linked to ceremonies associated with the construction of buildings (Rattray 1992:12, 53; Sugiyama 2010) and social prestige, as in the case of gladiatorial sacrifice (González 2010; González Torres 2010:402; Graulich 2005). In Mesoamerica, much of our knowledge of this practice is from the Aztecs, since there is detailed documentation in the chronicles of friars such as Bernardino de Sahagún and Diego Durán, as well as others such as Juan Bautista de Pomar. Other sources of information are the pre- and post-Conquest codices, such as Codices Borgia, Tudela, Vaticano A (Ríos), Magliabechiano, Borbón, Aubin, Florentino, and others.

However, human sacrifice was not exclusive to the cultures of the central highlands and the Late Postclassic period. There are numerous examples in the ceramics, murals, and sculpture iconography as well as archaeological and bioarchaeological evidence of its prevalence throughout Mesoamerica from as early as the Archaic period (Boone 1984; Graulich 2005; López Luján and Olivier 2010; Pijoan and Mansilla 2007, 2010b; Sugiyama 2005; Tiesler and Cucina 2007). In the Mesoamerican world view, children were linked to water, fertility and the divine (Ardren 2011; Broda 1971; Chávez 2010a, 2010b; Román 2010), therefore aptly appreciated as sacrificial offerings.

CHILD SACRIFICE IN MESOAMERICA

Bioarchaeological Evidence

Osteological evidence of physical alterations including cut marks, fractures, and exposure to fire evoke practices related to violence and cannibalism (Pijoan and Mansilla 1997; Tiesler 2007; Turner and Turner 1999), manifested not only in the remains of adult men and women but children as well. There are several examples, including those reported in the site of Tlatecomilla, Tetelpan in Mexico City dated to c. 300 B.C., where the remains of five children under the age of 12 were recovered from a deposit of mixed sherds and animal bones indicative of domestic refuse, suggesting they had been eaten (Pijoan and Masilla 1997). Among the remains was a

skull with a semicircular cut. In Tlatilco, a Preclassic village, a child with cut marks interpreted to be a result of ritual cannibalism was reported (Faulhaber 1965), although a subsequent study showed that these marks were caused by rodents (Pijoan 2010:17). Ortiz and Rodríguez (1999:248) have identified a possible child sacrifice from the time of the Olmecs (1600–1000 B.C.) at Cerro El Manatí, Veracruz, based on a massive deposit of carved wooden busts, rushes, and other plants, a skull and other scattered children's bones, and two primary neonatal burials. However, a formal bioarchaeological and taphonomic study are needed to confirm this interpretation.

Still older is the recovery of a pair of children possibly sacrificed from Coxcatlán cave, Tehuacán, Puebla, which produced a radiocarbon date reported as 5750 B.C. +/-250, corresponding to the El Riego phase. One of the two was seven years old, whose skull was placed in a basket after being exposed to fire. Another child, less than six months old, likewise had the skull removed and placed in a basket. Both exhibited cut marks consistent with defleshing (Pijoan and Mansilla 2007, 2010).

Evidence from central Mexico includes the Late Formative settlement of Xochitecatl, Tlaxcala, where a child's burial was found adorned with shell beads and one green stone bead; the body had been placed in the staircase of a pyramidal structure dedicated to the worship of fertility and rain, presumably an offering. At El Gallo Cave, Morelos, excavators recovered an offering consisting of a child burial accompanied by the remains of a dog and countless organic materials (Manzanilla 2000:92, 95).

At the site of Teotihuacan, there are several reported discoveries of offerings involving children, including fetal and perinatal individuals discovered inside altars at La Ventilla that have been interpreted as sacrifices made to Tlaloc (Jarquín and Martínez 1991). Serrano and Lagunas (1974:134–135) further interpreted these remains as the product of induced abortion for ritual purposes at the time of the construction of the altars, although Storey (1985: 531) points out that perinatal mortality is often a consequence of precarious maternal health conditions. It is also possible that the perinatal burials found in these altars were linked to child sacrifice, since some individuals exhibited cut marks (Cid and Torres 1997: 94). Rattray (1992:12, 53) believes that the children found in the

La Ventilla altars were sacrificed as part of ceremonies to mark new phases of construction, particularly in the Late Xolalpan phase.

Elsewhere at Teotihuacan, burials of children were discovered on the Plaza 1 platform at Oztoyahualco, interpreted as evidence of sacrifice (Cook de Leonard 1957:1). Child sacrifice at Teotihuacan is also represented by the remains of six-year-old children placed in a sitting position at each corner of the Pyramid of the Sun, presumably linked to ceremonies to mark the beginning of new construction (Batres 1906:22), which may be related to the cult of Tlaloc (Matos Moctezuma 2000:190). Finally, according to Manzanilla (2000:100–101), an altar dedicated to the *Tlaloque* was built in the tunnel beneath the Pyramid of the Sun, in which seven children were found to have been offered in sacrifice to Tlaloc.

Various reported instances of child burials that have been interpreted as evidence of dedicatory sacrifice related to construction activity are supported by circumstances of their location and context (Cook de Leonard 1957, 1971; Jarquín and Martínez 1991; Manzanilla 2000; Matos Moctezuma 2000; Millon 1981; Rattray 1992; Serrano and Lagunas 1974; Sugiyama 2005, 2010). It would, however, be a worthwhile effort to conduct a detailed bioarchaeological study to evaluate the veracity of these interpretations.

The most salient discoveries of skeletal remains pertaining to child sacrifice are from the Mexica culture, most notably the recently discovered offerings at the Templo Mayor of Tenochtitlan that included remains of children that had been placed inside vessels bearing the faces of pluvial deities (Chávez 2010a, 2010b; López Luján et al. 2010; Román 2010) and the Metropolitan Cathedral (Román 2010). Associated objects included turquoise mosaics, shells, and hawk wings. Suggested interpretations are that these children were sacrificed for three reasons: (1) requests for rain made mainly to Tlaloc but also to the fertility deities; (2) activities related to war, including the celebration of triumph in battles—one example of which is Offering 111, which contained a child adorned with an insignia that personifies Huitzilopochtli as the god of war, a breastplate and bracelet composed of rattles and snails, and the skeletal remains of a hawk; and (3) the celebration of special ceremonial events in the calendar as well as others celebrating the construction or expansion of buildings (Chávez 2010a:291; López Luján et al. 2010:387).

Children were sacrificed to Huitzilopochtli, as indicated by the discoveries of Offering 42 in the Templo Mayor at Tenochtitlan (López Luján et al. 2010). Given that the Mexica maintained a strong association between war and agriculture, it is unsurprising that children were offered to the warrior gods. Other ceremonies involving child sacrifice include specific events, such as the drought that occurred in 1454 (López Luján 1993; López Luján et al. 2010:368; Román 2010:359).

The children found in the offering at the Templo Mayor were immolated differently, depending upon the deity to whom they were presented. Those dedicated to Tlaloc had their throats cut, while those sacrificed to Huitzilopochtli had their hearts removed (Chávez 2010a: 295–296; López Austin and López Luján 2008:140).

Additional bioarchaeological examples of child sacrifice from central Mexico are the 30 children discovered during salvage excavations at the Templo Ehecatl–Quetzalcoatl (Templo “R”) in the neighboring Mexica city of Tlatelolco, almost all of whom were males whose health was in poor condition (Román 2010). Elsewhere in Tlatelolco, a burial deposit designated Entierro 14 contained a minimum of 152 individuals, including three children, all of whom had been interred at the same time. The majority exhibited cut marks and impact damage from both percussion and pressure

tools. Another burial deposit (Entierro 270) contained 104 mandibles, where fewer than five percent belonged to children (Pijoan and Mansilla 2010b).

Ethnohistorical Perspectives

In the central highlands, ethnohistorical references to human sacrifice include references to child sacrifice generally linked to the rituals dedicated to various Nahuatl deities in conjunction with the Mexica calendar. Table 1 shows the months in which children were offered in sacrifice, noting that this activity started in our December during the month *Atemoztli*, “lowering of water,” involving ceremonies celebrating Tlaloc while requesting water for sowing (Codex Magliabechiano 1970:88). It is during this month that the fourth sun was recreated and celebrations made to the *Tlaloque*. Child sacrifice continued in subsequent months, ending in *Huey Tozoztli* and *Etzalcualiztli*, our May, with the sacrifice of children, whose throats were cut, in offerings to Tlaloc and the *Tlaloque* in rituals linked to rain and agricultural activity (Broda 1971:321). Thus the rituals during the month *Atemoztli* spanned the period of the dry season until the arrival of the rainy season.

Rain was synonymous with abundance, sprouting, greenery, flowering, and the growth of maize, the basis of Nahuatl sustenance. The opposing scenario of drought was the loss of sustenance causing food shortage, and those who had the power to provoke this were the *Tlaloque*, which they did as punishment for situations arousing their anger. An important component of child sacrifice in the central highlands was its association with the aquatic deities, among them Tlaloc and the *Tlaloque*, “ministers of the small body,” who were servants of Tlaloc. In the same way, Ehecatl, god of wind, was part of the *Tlaloque*, and Quetzalcoatl, the feathered serpent, in the guardianship of Tlaloc was himself affiliated with the gods of rain. Chalchiuhtlicue, goddess of the waters of the springs, rivers, and lakes, was the older sister of the *Tlaloque* (Broda 1971:250–255, 260). Another deity that belonged to the complex of the divinities of water and fertility was Xipe Totec, “our lord the flayed one” (Broda 1971:256, n8), whose wearing of corpse skin symbolized regeneration. Sahagún (1829:bk. 1, p. 58; 1577:f. 18) reports that at the *tlacaxipeoliztli* festival, captive men, women, and children were offered to Xipe Totec and Huitzilopochtli.

In the month *Atlcahualo*, children were sacrificed as part of ceremonial requests for rain dedicated to the *Tlaloque*, Chalchiuhtlicue, or Quetzalcoatl (Sahagún 1829:bk. 1, p. 49; 1577:f. 3), while in the month *Huey Tozoztli* a festival was held honoring Chicomecoatl–Cinteotl, goddess of maize, during which children were immolated, and additional ceremonies for the *Tlaloque* were also made (Sahagún 1829:bk. 1, p. 64). Durán (1880:136–139) describes in detail a festival honoring Tlaloc of great importance involving child sacrifice: “... en amaneciendo salían todos estos reyes y señores con toda la demás gente y tomaban un niño de seis o siete años...delante la imagen del ydolo tlaloc, matauan aquel niño dentro en la litera...benian los sacerdotes que hauian degollado aquel niño...”

The link between the water deities and the child offerings are the tears shed before sacrifice, symbolizing rain: “Cuando llevaban los niños á matar, si lloraban y echaban muchas lágrimas, alegrábanse los que los llevaban porque tomaban pronóstico de que habían de tener muchas aguas en aquel año” (Sahagún 1829:bk. 1, p. 50; 1577:f. 3). The evenings, filled with dances and songs, prevented children from falling asleep, causing them to tire and weep

Table 1. Ceremonies in the Mexica calendar involving child sacrifice.

Month	Date	Myth/Deity	Characteristics
16 — Atemoztli	December 11 to 30	4° Sun/Tlaloc and <i>Tlaloque</i>	A boy and a girl, sacrificed by drowning. Start of child sacrifice
17 — Tititl-	December 30 to January 18	2° Sun/ <i>Xiuhtecutli</i>	Boys and girls sacrificed
18 — Izcalli	January 19 to February 7	3° Sun/corn sowing	Boys and girls sacrificed in hills, ravines and caves
Nemontemi	Transition period		
1 — Atlcahualo, Cuahuitlehua or Xilomaniztli	February 2 to 4	5° Sun/ <i>tlaloque</i> , Xipe Totec Chalchiutlicue, Quetzalcoatl	Children sacrificed in hills and lagoons. Mythological beginning of child sacrifice
2 — Tlacaxipeualiztli	March 5 to 24	New Sun/Xipe Totec, Hutzilopochtli, <i>Tlaloque</i>	Sacrifice of children until the arrival of rains
3 — Tozoztontli	March 25 to April 13	No relationship/ <i>Tlaloc</i> No relationship/ <i>Chalchiutlicue</i>	Sacrifice of slave children five to seven years old Sacrifice of young boys and girls, as well as newborns
4 — Huey Tozoztli	April 14 to May 3	No relationship/ <i>Chicomecoatl-Cinteotl. y tlaloque</i>	Children sacrificed in the hills and a girl in a lagoon. Nursing children also sacrificed
	May	No relationship/ <i>Tlaloc Tlaloque</i>	Offering of children of seven or eight years old for throat slashing
6 — Etzalcualiztli	May 13 to June 1	No relationship/Quetzalcoatl	Newborn immolation

(Sahagún 1829:bk. 1, p. 86). Therefore, the rain meant abundance: bud, greenery, and the flowering and growth of corn. A contrary scenario, the drought was the loss of livelihood, causing food shortages; the *Tlaloques* were the ones who had the power to provoke it, as punishment for their anger.

Child immolation was also offered before undertaking military action, as mentioned in the confrontation of the Cholulans against the army of Hernán Cortés: “y los sacerdotes sacrificaron a su Quetzalcoatl diez niños de tres años, las cinco hembras; costumbre que tenían comenzando alguna Guerra” (López de Gómara 2007:121).

WHO WERE THE CHILDREN OF SACRIFICE?

Child sacrifice was a cultural practice that occurred in prehispanic Mesoamerica, most commonly during the Postclassic period, as indicated by both bioarchaeological evidence and ethnohistorical data noted above. Bioarchaeological studies in the central highlands have identified instances of sacrificed children ranging from two to nine years of age (Chávez 2010a:294–296, 2010b:325; López Luján et al. 2010:375). But who were the children offered for sacrifice—that is, how they were selected? Did they share any peculiarities? The ethnohistorical sources indicate that children chosen for sacrifice ranged in age from newborns to eight year olds and could be either sex. In the Codex Magliabechiano (1970:62), it is noted that in the Festival of *Tozoztli*, “sacrificaban los niños pequeños y las mujeres niñas y también recién nacidos.” During the festivities to the *Tlaloque* in the month of *Atlcahualo*, breastfed children were sacrificed, as detailed by Sahagún (1829:bk. 1, p. 84). In the month *Etzalcualiztli* honoring Quetzalcoatl representing Tlaloc, newborn children were immolated (Codex Magliabechiano 1970:68), and on the feast of *Tocitotli* honoring the goddess of maize, “niños de teta” were offered (Codex Magliabechiano 1970:68). The slaughtered children could be anywhere from three to eight years old (Durán 1880:137; López de Gómara 2007:121; Motolinía 1967:64; Pomar 1821:18).

Sahagún (1829:bk. 1, p. 84) states that children offered in sacrifice had to have certain attributes, such as being born under a

positive calendrical sign, having two hair swirls on their heads, or purchased from their mothers, an indication that they belonged to families with low social status. However, Motolinía (1967:63) affirms that there were also children of nobility given in sacrifice by their parents, as indicated in the Codex Magliabechiano (1970:68), where he notes that the parents provided “niños de teta” specifically for sacrifice during the feast of the goddess of maize. The bioarchaeological data indicate that children selected for oblation must satisfy one other requirement: a bad state of health (Chávez 2010b:234; Román 2010:361).

TULA, THE TOLTECS, AND HUMAN SACRIFICE

Tula, believed to be the ruins of Tollan, the city of the Toltec civilization of Aztec legend, is located in central Mexico on the northwestern flank of the Basin of Mexico (Figure 1). Archaeological investigations conducted over the last 40 years (Cobean et al. 2012; Gamboa Cabezas and Cobean 2017; Healan 2012) revealed that Tula originated as a modest settlement around A.D. 650 and grew to a city of ca. 16 square kilometers during the Early and Late Tollan phase (c. 900–1150 A.D.; Table 2).

Both ethnohistorical and archaeological data indicate that human sacrifice played a critical role in Toltec society and religion. Ethnohistorical accounts note a famine at Tula lasting seven years that inflicted many deaths and led to the sacrifice of a large number of people, which is said to have given rise to the practice of child sacrifice known as *tlacatetehuítl* (Broda 1971:272), literally “human strips,” which occurred during the festival dedicated to Xipe Totec (González 2016:66).

Pomar (1821:15) provides a narrative of the adoration of Tlaloc in Tenochtitlan that includes the following: “estaba el ídolo el rostro al Oriente: hacíanle sacrificio de niños inocentes, cada año una vez.... No saben dar razón quién lo labró, ni por qué lo adoraban por dios de los temporales.... hay sospechas que lo hicieron un género de gentes que llamaron Tulteca.” According to Broda (1971:275), child sacrifice began in Tula, when the *Tlaloque* and the last Toltec ruler, Huemac, played a ball game, according to

Table 2. Chronology for the Tula region.

Period	A.D.	Phase
Late Postclassic	1600	Tesoro
	1500	
	1400	Palacio
Middle Postclassic	1300	Fuego
	1200	Late Tollan
1100		
Early Postclassic	1000	Early Tollan
	900	Terminal Corral
	800	
Epiclassic	700	Late Corral
	600	Early Corral
Late Classic	500	
Middle Classic	400	

mythology. Huemac was the winner; the *Tlaloque* paid with ears of maize, but Huemac rejected them, and so the *Tlaloque* left, taking the rain and causing an intense drought that destroyed the city. After four years, the *Tlaloque* returned to demand the sacrifice of the leader *Tozcuecuex's* daughter, delivering rain and the rising of the fifth sun.

Archaeological evidence of sacrifice can be seen at the site today, including the *chacmools*, anthropomorphic sculptures with the trappings of war, including a butterfly breastplate and a forearm band holding a knife apron, in a semi-flexed position and believed to be ritual furniture used in sacrifice or to hold the hearts of sacrificial victims (Jordan 2020:69; López Austin and López Luján 2001a:62; López Luján and Urcid 2002:32; Miller and Samayoa 1998:67). Graulich (2010) believes the *chacmools* personify the *Tlaloque*, while Miller and Samayoa (1998) link them to the sacrifice of prisoners of war and slaves, associated with Tlaloc and maize deities.

Toltec iconography includes the representations of skeletonized human figures, such as those depicted in the *Coatepantli*, “serpent wall,” associated with the deity *Tlahuizcalpantecutli*, “star of the morning” (Acosta 1956), one of Quetzalcoatl’s incarnations. This wall is topped with *almenas*, sculptural ornaments that represent the cut shell motif, which also evoke Quetzalcoatl (López Austin and López Luján 2001b:203). The importance of Tlaloc, a deity associated with human sacrifice among the Toltecs, is also evident in his representation in braziers found in both domestic and ceremonial contexts (Acosta 1956–1957; Mastache et al. 2002).

Archaeological evidence of human sacrifice at Tula includes the *tzompantli*, or skull rack, common to Mexica culture (Chávez 2015, 2018; López 1993; Ragsdale 2016:365; Solari 2008; Wade 2018), consisting of a rectangular platform in front of Ballcourt 2 at Tula Grande (Mastache and Cobean 2000:126; Matos Moctezuma 1972, 1974, 1976). The structure was dated to the Aztec occupation based on associated ceramics and an offering found inside, although the structure is almost certainly Toltec given its mode of

construction and the likelihood that the offering was intrusive (Healan 2012:63).

Other evidence comes from salvage excavations at the site of the construction of the Museo Jorge Acosta that encountered over 121 burials, including 53 dated to Tula’s Early Postclassic Tollan phase apogee. Evidence of human sacrifice of children and adults in the form of decapitated skulls, some with traces of fire exposure (Gómez et al. 1994:100), and secondary burials that appear to have been pre-construction dedicatory offerings (Gómez et al. 1994:95) were recovered.

THE PGR LOCALITY AND THE CHILDREN OF FEATURE 5

In 2007 and 2009, an archaeological salvage project was conducted at the site of the construction of the Procuraduría General de la República (PGR), located immediately east of the southeast corner of the Tula Archaeological Zone (Figures 1 and 2). Under the direction of Luis Gamboa Cabezas, excavation partially exposed the remains of several structures that represent a series of adjacent residential compounds designated OPI, OP2, and OP3 (Figure 2), each oriented roughly north-south. The three compounds contained several highly unusual features unlike anything previously found in Tula (Gamboa Cabezas and Healan 2021).

OPI, the westernmost of the three, includes an exterior patio surrounded by platforms supporting one or more buildings (Figure 2). The patio floor was covered with stucco and contained a prominent rectangular altar that adjoined the western wall. The altar had been partially dismantled in prehispanic times and contained fragments of a skull, long bones, and other body parts that indicated a child’s burial, as well as loose adult bones (Figure 3a). A stone replica of a human head (Figure 3b) had been placed on top of the altar, and nearby was a fragment of a carved stone slab containing a representation of the h–j–p figure common at Tula Grande and elsewhere (Jiménez García 2021).

Excavation beneath the patio floor encountered a massive deposit of human remains (Figures 2a and 3c). Designated Feature 5, the deposit includes the remains of a large number of individuals, mostly children, that is the subject of this article.

OP2 and OP3 also contained human remains, as described by Gamboa Cabezas and Healan (2021). OP3 additionally contained a small, partially exposed stepped platform (Figure 2) partially overlying a shallow depression covered with stone slabs that contained a hollow ceramic sculpture (Figure 2f) some 1.4 meters in length of the deity the Aztecs called Xipe Totec (Gamboa Cabezas 2012; Gamboa Cabezas and García 2016; Gamboa Cabezas and Healan 2021:Figure 20). Some 15 meters northeast of OP1, exploratory excavation in Unit 16 encountered a burial of two children, whose remains are included in the summary sections below.

Feature 5 forms an arc-shaped distribution in front of the altar (Figures 2a and 3), although the deposit lies beneath the patio floor and altar, hence predates their construction. Excavation revealed that Feature 5 was deposited on a natural surface a few centimeters above *tepetate*, a caliche layer that constitutes the local bedrock, which lay approximately 50 centimeters below the OPI patio floor, with an intervening fill rich in artifacts and scattered human bone presumably derived from Feature 5.

As seen in Figure 3, the remains formed distinct clusters, each of which was designated by Gamboa Cabezas (2007) as a burial and recovered as a single entity. Some 18 such “burials” were recovered from Feature 5, designated 5A–R (Figure 3). Three additional

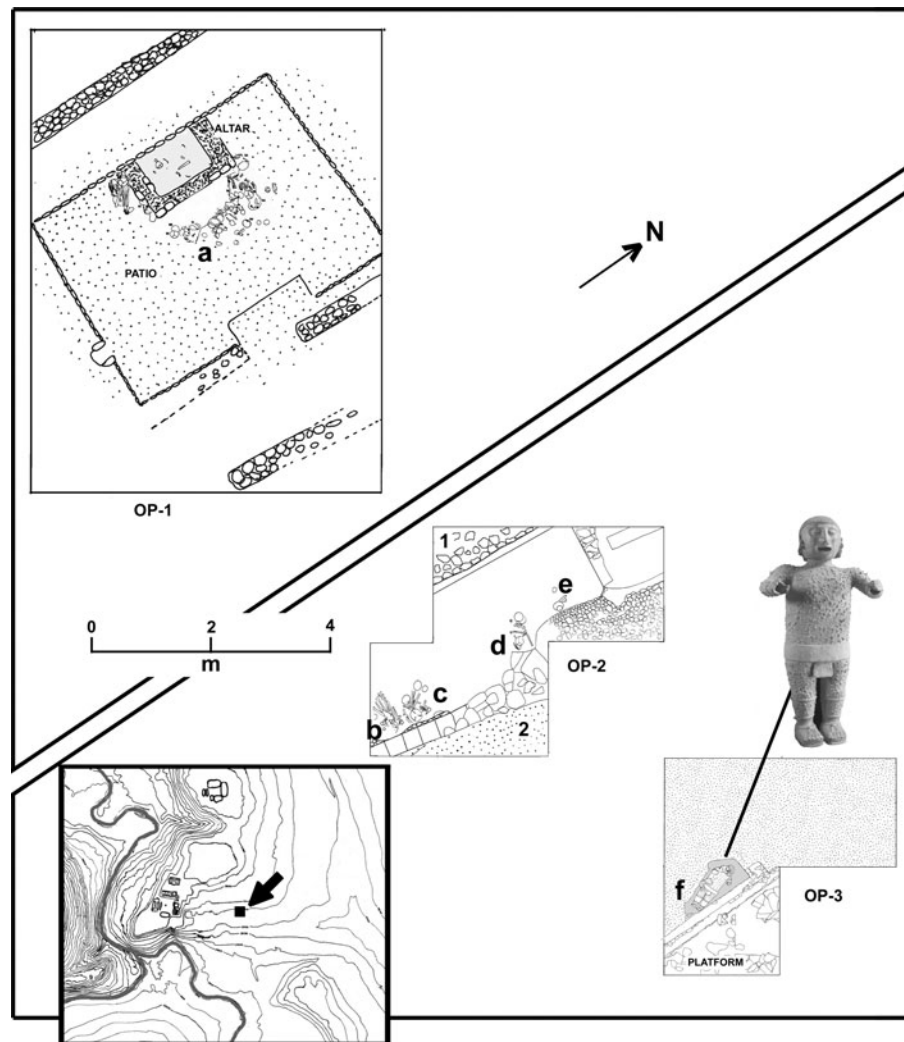


Figure 2. The PGR locality (inset), Operations (OP) 1, 2, 3, and various findings discussed in the text: a, Feature 5; b–e, probable seated individuals in OP2 f, hollow ceramic sculpture of Xipe Totec in OP3. From Gamboa Cabezas and Healan 2021.

“burials” (Figure 3:3A–3C) encountered along the south side of the altar were initially designated Feature 3, but are believed to be part of Feature 5.

LABORATORY METHODS

Analysis of the Feature 5 skeletal remains was performed in the bodega at the Museo Jorge Acosta in the Tula Archaeological Zone, where the remains are currently stored. Henceforth, I will use the term “cluster” to refer to what were designated burials during excavation, given that it appears to be a single massive funerary deposit. However, I have retained the nomenclature (5A–5S, 3A–3C) that was originally assigned to the “burials” to maintain consistency, hence each cluster is identified by Feature number (5 or 3), plus a Roman letter.

During analysis, each individual was identified by their cluster affiliation; hence, the individual in cluster 5A is referred to simply as individual 5A. Several clusters contained more than one individual, and the nomenclature was modified to indicate this. For example, the two individuals in cluster 5B are designated individuals 5B-1 and 5B-2.

The determination of the minimum number of individuals (MNI) was based on quantity, laterality, and compatibility in terms of morphology and size of the osteological elements of each individual.

Estimation of age at death was based on dental eruption for subadults (Ubelaker 2003:84) and on measurements of skull and mandible bones when teeth were lacking (Schaefer et al. 2009). Diaphyseal length of long bones was also assessed (Ortega 1998). In the case of adult individuals, standardized variables from studies in physical anthropology were employed, such as morphological changes in the auricular surface and pubic symphysis, suture fusion, and dental wear (Buikstra and Ubelaker 1994).

Estimation of sex in adults was based on established morphoscopic criteria, principally, in the skull and ilium (Buikstra and Ubelaker 1994). In subadult individuals, estimation of sex utilized the methodology employed by Estévez et al. (2017), Hernández and Peña (2010), Loth and Henneberg (2001), Schutkowski (1987, 1993), and Sutter (2003) based on several morphological features: amplitude of the angle of the greater sciatic notch, curvature of the ilium, and depth of the greater sciatic notch, as well as features of the mandible such as the protrusion of the chin region and shape of the anterior dental arcade, along with the size of the

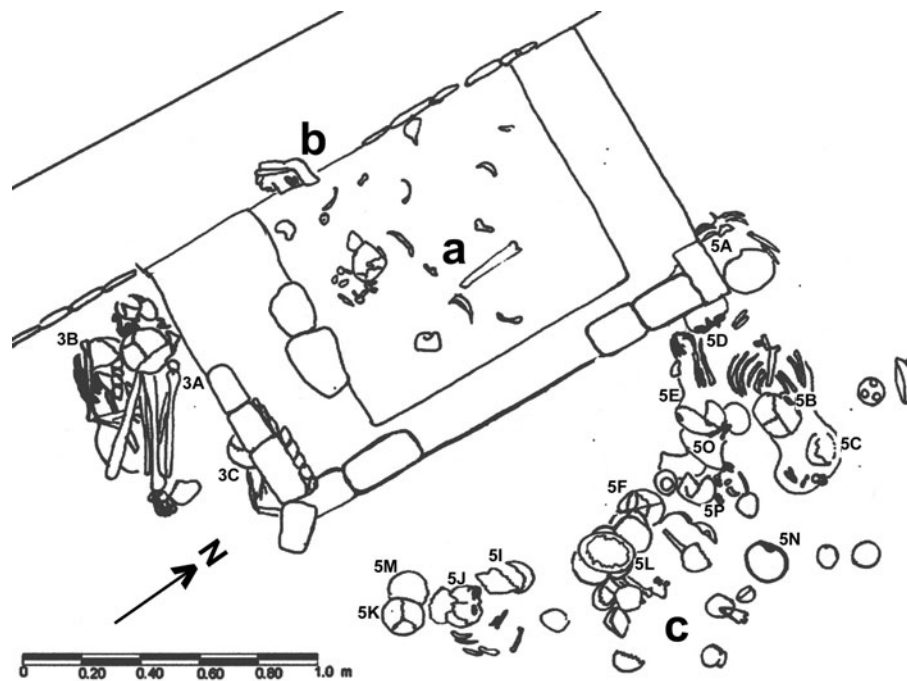


Figure 3. Detailed view of excavations in patio, OPI: a, human bones inside altar; b, head portion of human sculpture; c, Feature 5. Number/letter designations in Feature 5 refer to clusters of bones assigned and recovered as “burials” by excavators. From Gamboa Cabezas and Healan 2021.

mastoid process in the skull. Sex determination for children over four years of age was evaluated using two variables: the eversion of the gonion and the shape of the supra-orbital margin. Sex was often difficult to estimate since not all individuals still possessed identifiable elements that would facilitate it.

Examination for possible anthropogenic features, such as cut marks, was conducted using a magnifying lens of up to 10×, recording each perceived feature by body segment and drawing the feature. Other alterations, such as exposure to fire and perimortem trauma and fractures, were recorded when observed.

Evaluation of health conditions included the osteopathologies that are defined morphoscopically: (1) infectious processes; (2) micronutritional deficiencies such as iron deficiency through *cribra orbitalia* and porotic hyperostosis, as well as vitamin C and D deficiency (scurvy and rickets); and (3) oral pathologies—dental caries, abscesses, alveolar resorption, and dental calculus. This information was obtained to assess the role that health status may have played in the selection of children offered in sacrifice, according to the information derived from the investigations carried out by Román (2010:360–361).

BIOLOGICAL CHARACTERIZATION, ANTHROPOGENIC ALTERATIONS AND HEALTH CONDITIONS

Table 3 summarizes the age at death and sex distributions of Feature 5 in OPI. Bioarchaeological analysis determined a total of 49 individuals, of which only two (4.1 percent) are over 18 years old. The remaining 47 are subadults, which include the individuals in the 15–19 age group who have an average estimated age of 17 years. The complete and almost complete individuals were found in a sitting position (Gamboa Cabezas 2007; Gamboa Cabezas and Healan 2021), a common position for both children and adults for

Early and Late Tollan phase interments at Tula. Of the 39 burials recovered from the salvage excavations at the construction site for the current Museo Jorge Acosta, 13 individuals (33.3 percent) were buried in that position (Gómez et al. 1994).

Notably, the adult individuals in Feature 5 are represented by loose bone elements. One example is the adult bones from inside the altar that include the left humerus and minor bones of the hands and feet, some teeth, and a fragment of the spinous process of a cervical vertebra. Another example is burial 5D, consisting of a fragment of the diaphysis of the ulna. An exception was individual 5R, discussed below, a male adult of 25–30 years, consisting of an articulated skull, mandible, hyoid bone, and cervical vertebrae.

Feature 5 includes five fetuses from 30 weeks gestation to newborns, representing 12.2 percent of the 49 individuals. The largest number of individuals are in the age range from three months to 2 years, at just over half of the osteological sample (Table 3). Using the methods for determining sex described above, 9 (18.4 percent) of the 49 individuals were identified as females, 8 (16.3 percent) as males, and 32 (65.3 percent) were indeterminate and mostly the remains of incomplete individuals (Table 3).

Examination revealed that 34 of the 49 individuals (69.4 percent) did not exhibit visible alterations, while the remaining 15 individuals, plus loose bones of several associated individuals, exhibited various kinds of anthropogenic features (Table 4). Cut marks were observed on the crania of 16 individuals and on a loose malar bone. A peculiarity of the cut marks on the skulls is that they involve scraping characterized by small areas with multiple striations (Figure 4), in some cases visible only under magnification. Some specimens exhibited fine linear cut marks on various bones, including three mandibles (Figure 5). Cut marks also were detected on the long bones of several individuals (Figure 6), and, in two cases, on the inner surface of a rib. One of the latter two, individual 5H, also exhibited scraping on various parts of the skull, and the

Table 3. Distribution of age and sex of the individuals from Feature 5.

Age Group	Sex						Total	
	Female		Male		Indeterminate			
	N	%	N	%	N	%	N	%
Fetus	0	-	1	2.0	2	4.1	3	6.1
Perinatal	1	2.0	0	-	2	4.1	3	6.1
3 months	1	2.0	0	-	3	6.1	4	8.2
6 months	0	-	0	-	3	6.1	3	6.1
9 months	2	4.1	1	2.0	1	2.0	4	8.2
1–2 years	3	6.1	1	2.0	12	24.5	16	32.7
3–4 years	1	2.0	1	2.0	3	6.1	6	12.2
5–9 years	1	2.0	1	2.0	2	4.1	4	8.2
10–14 years	0	-	0	-	1	2.0	1	2.0
15–19 years	0	-	1	2.0	0	-	1	2.0
25–29 years	0	-	1	2.0	0	-	1	2.0
Subadult	0	-	0	-	1	2.0	1	2.0
Adult	0	-	0	-	2	4.1	2	4.1
Total	9	18.4	8	16.3	32	65.3	49	100

other, individual 5J–1, showed cuts on the left malar bone and right ulna (Table 4).

Individuals 5F, 5P, and 5Q exhibited the greatest number of alterations on both the cranium and the postcranial skeleton, indicating that they likely had been completely flayed. While the other complete or nearly complete individuals did not exhibit any evidence of cut marks, it is possible that they received the same treatment but showed no traces. There is strong evidence for decapitation, as in the case of individual 5M, a three-year-old child consisting of the skull and two fragments of cervical vertebral arches, with cut marks on the parietal bones indicative of scalping as well. In their study of a sample of Tollan phase burials from the Museo Jorge Acosta salvage excavations, Gómez et al. (1994: 87–91) report skulls of children recovered from the foot of an altar, with the first cervical vertebra articulated and traces of exposure to fire, although there is no mention of cut marks.

Another possible decapitate is a young adult male (individual 5R), whose remains included the skull, mandible, fragments of the second and third cervical vertebrae, and the hyoid bone. The skull has a perimortem hole in the superior part right between the coronal and sagittal suture which perhaps was used to suspend the head for display. There are also cut marks that were truncated by the hole, suggestive of scalping that would have occurred earlier (Figure 7). This individual also shows antemortem trauma to one side of the hole, reflecting exposure to violent actions when he lived. Finally, individual 5B-2, represented by the skull and mandible of a perinatal female, could have been a decapitation.

Associated with individual 5D was an adult ulna with cut marks at the shaft, an old fracture, major gnawing marks, and percussion pits at the distal end which were perhaps traces of cannibalism, a common practice in Mesoamerica, according to osteological studies (Lagunas and Serrano 1972; Medina and Sánchez 2007; Pijoan 2010; Pijoan and Mansilla 1997; Tiesler 2007; Tiesler and Cucina 2007) and colonial accounts (Durán 1880; Landa 1982; Pomar 1821; Sahagún 1829).

Regarding the overall health conditions of the individuals, the most common pathologies were chronic infectious processes with differing degrees of periostitis (Table 5). Almost all of the

individuals in Feature 5 show periosteal lesions in the tibiae (91.3 percent) and in the rest of the skeleton as well (96.4 percent; Figure 8d). Similarly, iron deficiency is revealed by porotic hyperostosis (Figure 8b) present in 21 (95.7 percent), and less prevalent *cribra orbitalia* (78.6 percent, 11/14; Figure 8a).

In a previous osteological study of burials recovered in excavation of habitations at the Plaza Charnay and Cerro de la Malinche localities within the ancient city (González and Huicochea 1996), evidence of infectious disease was observed in more than half of the children from Cerro de la Malinche and about three-quarters of the Plaza Charnay, in comparison to children from Feature 5, almost all of whom had periosteal reactions (91.3 percent). Moreover, only about half of the children in both of the aforementioned localities exhibited evidence of iron deficiency, unlike children from Feature 5 with high percentages (95.7 percent porotic hyperostosis and 78.6 percent *cribra orbitalia*). Thus, the little comparative data available for children from other archaeological contexts at Tula suggest that the children in Feature 5 had a higher incidence of health problems. Scurvy caused by deficiency of vitamin C (ascorbic acid) was also common (Table 5), given that 23 individuals (85.2 percent) showed the characteristic porosity of this disease in skull bones (Figure 8c) and mandible.

The above conditions represent the kind of precarious health conditions characteristic of famines that cause comorbid conditions (Brickley and Ives 2008). Regarding oral pathologies, dental caries were observed in four individuals: a two year-old (5O), two 6 year-olds (5A and 5P-1), and a young adult male (5R).

THE CHILDREN OF FEATURE 5: VICTIMS OF MASS SACRIFICE

The 21 complete or nearly complete individuals in the sample under study are primary burials that represent simultaneous deposition or deposition over a brief time. It should be remembered that mass depositions are generally considered an indicator of human sacrifice, although others have noted that these could be instead a consequence of other circumstances, such as accidents, epidemics, or the reuse of funeral spaces (Pereira 2007:92; Weiss-Krejci 2003: 373–374). However, these individuals were clearly victims of

Table 4. Individuals from Feature 5 with anthropogenic modifications.

Individual	Age	Sex	State	Marks/Location	Observations
3B	1.5 years	Female	Complete	Scraping on frontal, left parietal, occipital, and cut marks on the thoracic vertebra	Beneath individual 3A Red pigment observed on the inside of a left rib
5A	6 years	Female	Complete	Pressure marks on right radius	No associated objects
5B-1	3 years	Female	Complete	Cut marks on left parietal and mandible	Associated monochrome vessel
5B-2	Perinate	Female	Skull and mandible	Without alteration, maybe beheaded	Associated monochrome vessel
5D-3	4 years	Female	Complete	Scraping on frontal and parietals. Cut marks on femurs	Associated pipe and obsidian prismatic core. Overlain by stone slabs
	Adult	?	Loose bone element	Adult ulna with cut marks at the shaft, nibbling, and percussion pits at the distal end.	
5E	1.5 years	Female	Complete	Scraping on parietals and occipital	No associated objects
5F	9 months to 1 year	Female	Complete	Scraping on parietals and occipital. Cut marks on mandible, left humerus, right radius, femurs, and right tibia	Associated objects were monochrome bowl and anthropomorphic vessel. Also, several loose human bones
5F associated	1.5 years	?	Loose bone elements	Cut marks on right zygomatic and neural arch of thoracic vertebra	No associated objects
5H	9 months	Female	Complete	Scraping on frontal, parietals, and occipital. Cuts marks on the inner face of rib	Associated object was a tripod bowl
5I	6 months	?	Skull and scapula fragments	Scraping on frontal and parietals, and fire exposure	No associated objects
5J-1	9 months	Male	Complete	Cut marks on left zygomatic, right ulna, and inner face of a right rib	No associated objects
5L	4 years	Male	Complete	Scraping on right parietal, and cut marks on mandible and left tibia	Associated miniature jug
5M	3 years	?	Skull and two fragments of cervical neural arches	Cut marks on parietals, maybe beheaded	Beneath individual 5K No associated objects
5N	10–12 years	?	Almost complete	Cut marks on parietals, occipital, and right tibia	Associated objects included an anthropomorphic figurine and three monochrome bowls
5O	3–4 years	?	Complete	Scraping on frontal and left parietal, cut marks on occipital	Associated objects included two copper bells, a miniature jug, and two plates
5P	6–7 years	Male	Complete	Scraping on frontal and parietals. Cut marks on the external face of a rib, right humerus, right femur, and tibias	Under the individual 5O No associated objects
5Q	6 years	?	Almost complete	Scraping on frontal, right parietal, and occipital. Cuts marks on right ulna, right radius, right femur, and tibias.	No associated objects
5R	25–30 years	Male	Skull, mandible, hyoid, Fragments of the first and second cervical vertebrae	Cut marks on frontal and right parietal, skull with perimortem hole on right parietal, beheaded	Healed trauma observed on the right parietal

mass sacrifice, a singular event that was soon covered by construction.

The ritual violence evident in the human-induced alterations, including perimortem trauma, cut marks, and modification for display, is generally considered irrefutable evidence of sacrifice. The anthropogenic alterations discovered in the 15 primary burials in Feature 5 represent a distinctive instance of sacrifice noted by Turner and Turner (1999:41–42), involving inhumations in anatomical position with alterations such as fractures and cut marks, as in the present case.

Thus, the evidence suggests the individuals in Feature 5 were sacrificed, perhaps by cutting the throat, since according to the ethnohistorical sources this was the treatment for children offered to the aquatic deities by the Aztecs: "...a estos niños inocentes no les sacaban el corazón, sino degollábanlos, y envueltos en mantas" (Motolinía 1967:63). The sacrifice of children by cutting the

throat allowed those in charge to obtain blood that was then sprinkled on the images of the deities, the food given in the ceremonies, and in the space where sacrifices were offered (Durán 1880: 138–139, 142). Motolinía (1967:64) says that water was "sold for the blood of children." The most common bioarchaeological indicator of cutting the throat is the presence of cut marks on the cervical vertebrae (Houston and Scherer 2010:182–183; Hurtado et al. 2007: 223; Tiesler 2007:23–24; Tiesler and Cucina 2010:200, 205).

Those marks were imperceptible in the children on Feature 5; it is possible that this type of child immolation has not left traces if the utensil used to cut the neck did not penetrate to the bones, as Pijoan and Mansilla (2010a:129) have warned. Furthermore, given that most of the children in Feature 5 were less than four years old, it was probably unnecessary to make a deep incision in the throat to cut the main arteries. Another way of executing a ritual killing of children that does not mark the skeleton is drowning, a practice

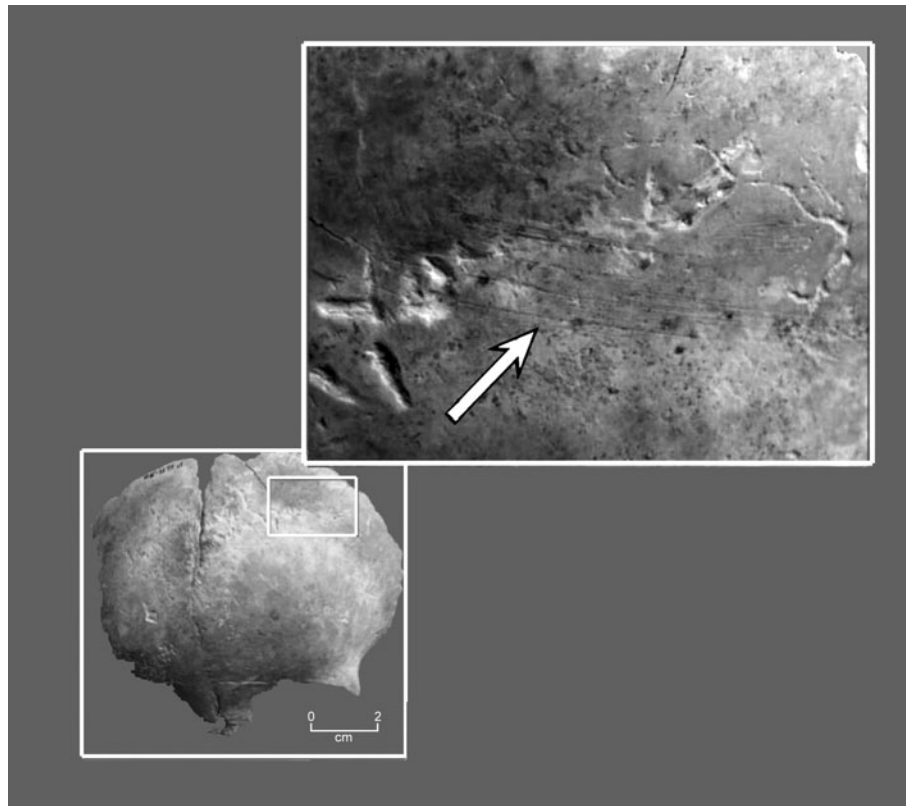


Figure 4. Frontal bone of individual 3B, showing cut marks (arrow). Photograph by author.

also alluded to in historical sources (Codex Magliabechiano 1970:58, 88).

Sahagún (1829:bk. 1, p. 84) and Pomar (1821:17) note that in ceremonies to the rain deities, child sacrifice was performed by heart extraction, for which the most common bioarchaeological evidence is cut marks on the ribs (Anda 2007:195; López Luján 2010:377–379; Tiesler 2007:23, 25; Tiesler and Cucina 2010:199). Two

of the children from Feature 5 show evidence of this practice: individual 5H, a nine-month-old girl with one of her ribs cut on the inner face, and individual 5J-1, a nine-month-old male (see Table 4). In Unit 16, located 15 m to the northeast, a burial was recovered that was composed of two individuals: a six-month-old infant and a 1.5-year-old child. The child exhibited cut marks on the inner face of the ribs, demonstrating that immolation was by extraction of the heart, while the skull revealed evidence of exposure to fire. Associated with these two individuals was an adult skull fragment where the occiparietal section of the right side showed a cut mark and perimortem fracture, characteristic features of skulls placed on the *tzompantli*, or skull rack (Solari 2008:162).

Decapitation was a common practice in Mesoamerica (e.g., Chávez et al. 2015; González et al. 2001; Hurtado et al. 2007; Pijoan and Mansilla 2007, 2010a; Román 2010:356; Sugiyama 2005). Evidence of decapitation includes skulls with the first cervical vertebra present, and the presence of cut marks or fractures (Hurtado et al. 2007:222; Pijoan 2010; Pijoan and Mansanilla 2010a:113; Tiesler 2007:23, 25; Tiesler and Cucina 2010:199). In the Feature 5 sample, individual 5B-2, a perinatal female, individual 5M, a three-year-old child, and individual 5R, an adult male, all exhibited skulls with intact cervical vertebrae, and although the poor state of preservation prevented determining whether cut marks were also present, they almost certainly represent decapitation.

To what deity were the children of Feature 5 offered? Much has been said about the relationship between children and the water divinities. Considering that Tlaloc was apparently a prominent deity in Tula, it is possible the children of Feature 5 were sacrificed to him and the other rain deities. As noted above, one of the characteristics of sacrificed children is poor health (Román 2010), and

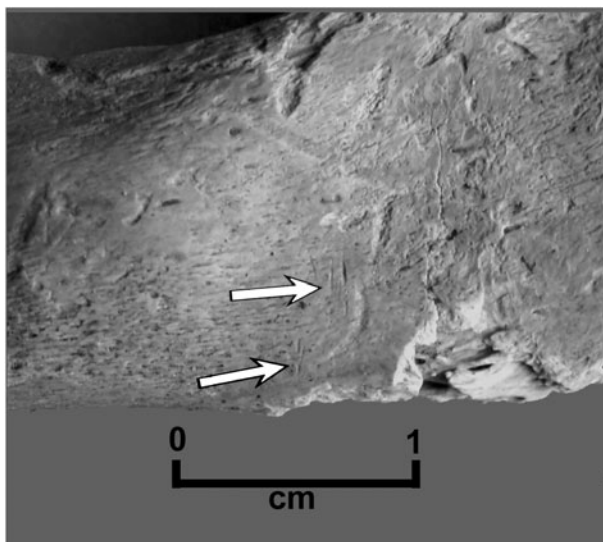


Figure 5. Mandible of individual 5F, showing cut marks (arrows). Photograph by author.

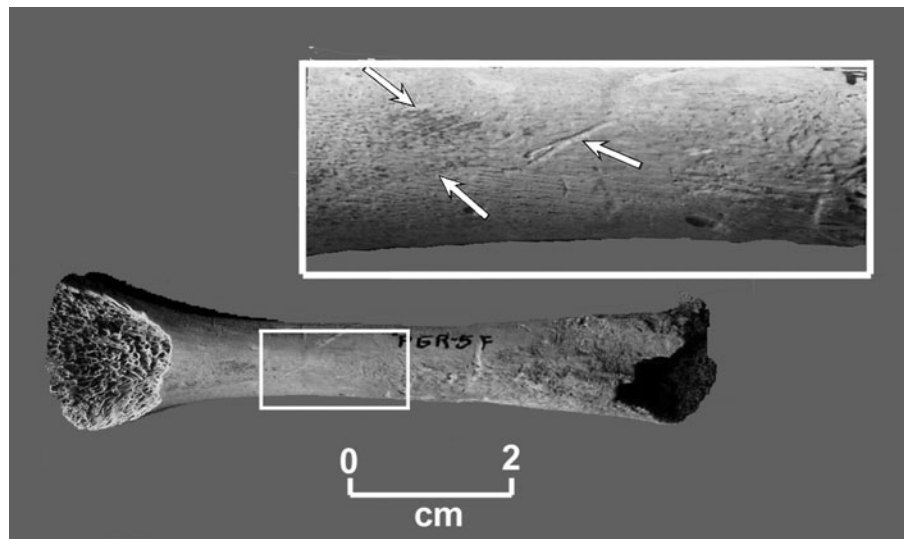


Figure 6. Right humerus of individual 5F, showing cut marks (arrows). Photograph by author.

almost all the children in Feature 5 exhibit deplorable health conditions related to infectious diseases and nutritional deficiencies, including iron and ascorbic acid. These health problems can be linked to times of scarcity caused by calamities such as prolonged droughts. These paleopathologies would have caused strong discomfort and pain, inducing continuous crying in children, which, as noted above, appears to have been a key factor in selecting children for sacrifices to the rain deities, since tears were an augury of rain (Sahagún 1829:bk. 1, p. 50; 1577:f. 3).

Some children of Feature 5 may have been offered to Tlaloc and perhaps the *Tlaloque*, recalling the myth of the ball game played

between Huemac and the latter individuals, and may have been sacrificed by slitting the throat. Matos Moctezuma (2010:55) associates this type of sacrifice with fertility, which seems quite likely given that the deities of water and fertility are intimately linked, including the maize goddesses Chicomecoatl, Xilonen, Cinteotl, and Ilamatecutli, as well as other deities including Quetzalcoatl and Xipe Totec (Broda 1971:246, 257, 263).

A large ceramic sculpture of Xipe Totec was found buried in a neighboring residential complex (Figure 2f). Sacrifices made to Xipe Totec involved the offering of the flayed skins of captives, mainly adult males but also women and children (Sahagún 1829:

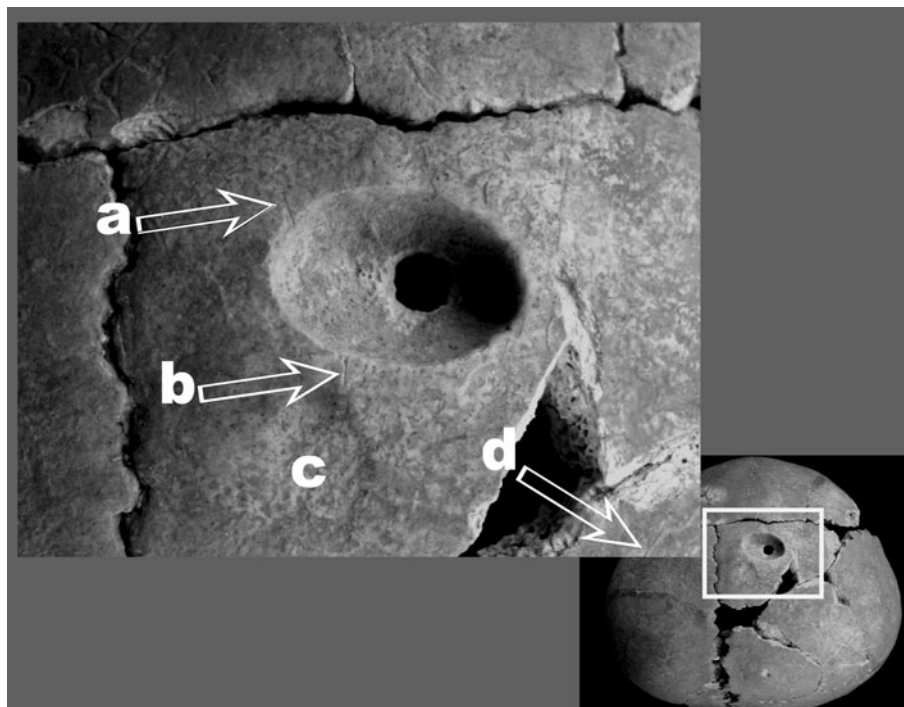


Figure 7. Skull of individual 5R: (a and b) cut marks truncated by the *perimortem* hole; (c) healed injury; (d) other cut mark. Photograph by author.

Table 5. Paleopathologies of individuals from Feature 5.

Age Group	Paleopathologies							
	Periosteal Reaction in Tibiae		<i>Cribra orbitalia</i>		Porotic Hyperostosis		Porosity (scurvy)	
	N	%	N	%	N	%	N	%
Feto	-	-	-	-	-	-	2	7.4
Perinatal	1	4.3	2	14.3	2	8.7	1	3.7
6 months	2	8.7	1	7.1	1	4.3	3	11.3
9 months	5	21.7	2	14.3	3	13.3	5	18.5
1–2 years	5	21.7	3	21.4	6	26.1	6	22.2
3–4 years	3	13.0	2	14.3	4	17.4	3	11.3
5–9 years	3	13.0	1	7.1	3	13.0	3	11.3
10–14 years	1	4.3	-	-	1	4.3	-	-
15–19 years	1	4.3	-	-	1	4.3	-	-
25–29 years	-	-	-	-	1	4.3	-	-
Subadult	-	-	-	-	-	-	-	-
Adult	-	-	-	-	-	-	-	-
Total	21/23	91.3	11/14	78.6%	22/23	95.7	23/27	85.2

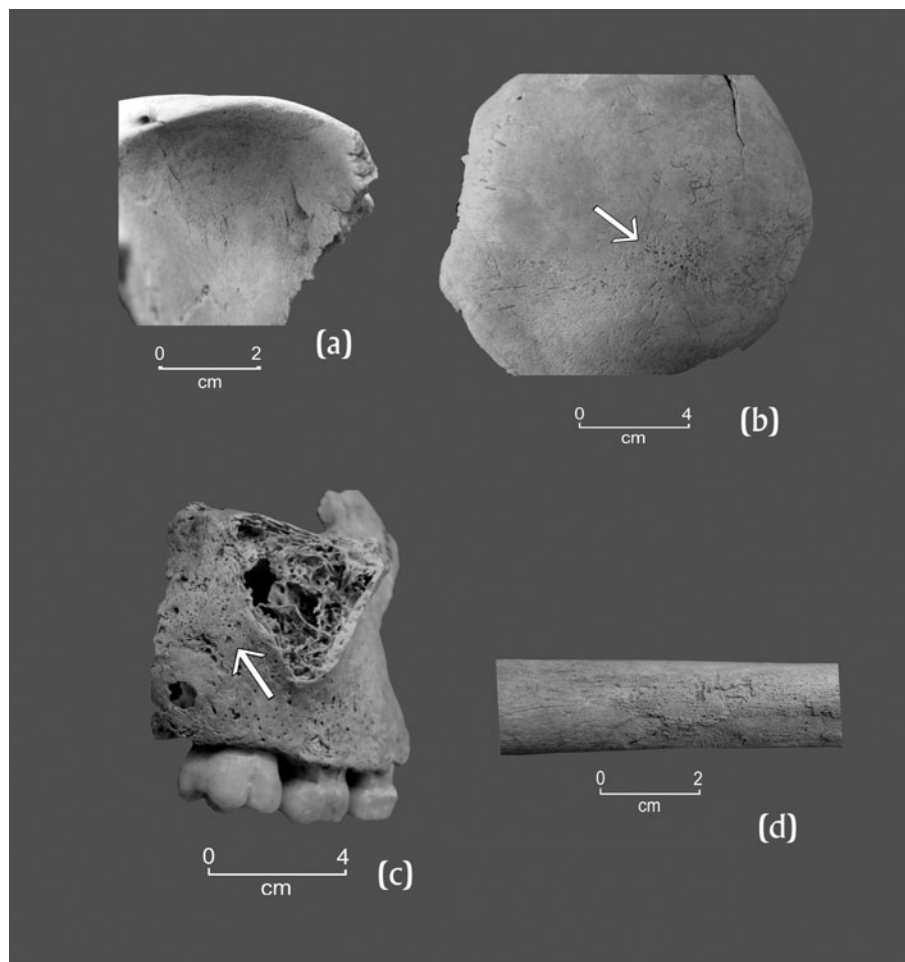


Figure 8. Paleopathologies observed in Feature 5: (a) orbital roof of individual 5H with *cribra orbitalia*; (b) parietal of individual 5H with porotic hyperostosis (arrow); (c) maxilla of individual 5P with porosity (scurvy) (arrow); (d) tibia of individual 5P with periosteal reaction. Photograph by author.

bk. 1, p. 58; 1577:f. 18). Hence, some of the individuals in Feature 5 may have been sacrificed to this deity, especially individuals 5F, 5P, and 5Q, all of whom displayed extensive cut marks suggestive of flaying on the skeletons. Xipe Totec was associated with regeneration and was integrated into the group of water and fertility deities (Broda 1971:256), recalling the purported origin of child sacrifice in Tula, as *tlacatetehuítl*, or “human strips,” that occurred during the festival dedicated to Xipe Totec (Broda 1971:272, 275; González 2016:66).

FINAL COMMENTS

Given its representation in iconography and sculpture, there can be little doubt that human sacrifice was practiced at Tula. The practice has also been inferred from cranial remains recovered from the *tzompantli* at Tula Grande and from burials involving children, yet without direct bioarchaeological confirmation. The children of Feature 5 in the PGR locality document the practice of ritual

sacrifice in a forceful manner, as indicated by the pattern of simultaneous burial in a patterned manner and cut marks consistent with flaying, plus evidence of decapitation. It is quite possible that some individuals may have been sacrificed by slitting of the throat, despite the lack of direct evidence since, given the ages of the children, it was probably unnecessary to make an incision sufficiently deep to have left marks on the neck vertebrae. The rituals involved are believed to have been dedicated to the deities of water and fertility, although Xipe Totec also may have been involved given the proximity of a large representation of this deity and his association with regeneration.

Although I was able to address many of the questions raised by this highly unusual find, there remain several unknowns. Were these children local, that is, were they denizens of Tula or from other regions, and, if so, from where? Future DNA analysis would help answer this question, as well as confirm the sex of the individuals. This is clearly only a preliminary step in acquiring concrete data to reveal the practice of human sacrifice among the Toltecs.

RESUMEN

Durante las excavaciones de salvamento arqueológico en los límites de la poligonal de la zona arqueológica de Tula, Hidalgo, fue expuesto una complejo residencial –Elemento 5– que contiene un altar en un patio abierto, en donde fue descubierto un depósito masivo de restos óseos humanos, representando un Número Mínimo de Individuos de 49, la mayoría en posición sedente. La mayoría de los individuos son niños.

El análisis bioarqueológico apunta a que fueron sacrificados, dado que presentan modificaciones antropogénicas como marcas de corte en el cráneo y otros elementos óseos sugiriendo el desollamiento, también existen individuos representados solo por el cráneo y las vértebras cervicales aludiendo la decapitación.

Una particularidad de estos individuos es que reflejan condiciones de salud precarias, característica común entre los niños ofrendados a Tláloc

entre los aztecas. De acuerdo a las fuentes etnohistóricas, los niños sacrificados a esta deidad, generalmente fueron degollados, los infantes encontrados en el Elemento 5, no presentaron huellas de corte en las vértebras cervicales por su edad temprana, pero no se descarta la posibilidad de esta forma de sacrificio.

El descubrimiento de una escultura de Xipe-Tótec (nuestro señor desollado) en un complejo residencial adyacente, sugiere un posible vínculo entre la inmolación infantil con esa deidad, dado que esa deidad está íntimamente relacionada con la regeneración y la fertilidad.

La hipótesis sugerida es que esos infantes fueron ofrecidos para la construcción del altar que fue erigido posteriormente a la inhumación del acumulado de restos humanos, quizá dedicado a las deidades acuáticas y de la fertilidad, incluyendo Xipe-Tótec.

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