

Human cerebral palsy and a siege of Tver (Russia) by Batu Khan hordes (1238): A case study*

• Andrei V. Zinoviev •

Zoology and Physiology Division, Tver State University

Address for correspondence:

Andrei V. Zinoviev

Tver State University

Faculty of Biology

Zoology and Physiology Division

Chaikovskogo pr. 70a

170002 Tver, Russia

E-mail: zinovev.av@tversu.ru

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Abstract

A partial skeleton of an elderly man, suffered from cerebral palsy, is described. The person died in the collapse of the building destroyed by the fire in the stronghold of Tver, most likely during the siege of the city by the hordes of Batu Khan in 1238. Located at the basement of the structure, the body of a man was not exposed to fire, unlike the bodies of an elderly woman, a girl and a child who died in the same house. Unsuitable for the protection of the city these people died in the building where they were hiding.

Keywords: Cerebral Palsy; Tver; Batu Khan Hordes; Mongol-Tatars; Siege; Middle Ages

* Author is responsible for language correctness and content.



Introduction

The archaeology of the Kremlin, as the fortified centre of a medieval Russian city, is of extreme interest not only because of artefacts associated with the life of a privileged part of society; refuge in wartime, the Kremlin yields traces of the past sieges. Not only remnants of fortifications and elements of armoury testify sieges; the skeletons of participants often tell stories. The archaeological and anthropological materials from Kiev (1), Old Ryazan (2), Izyaslavl (3) and Yaroslavl (4) (Figure 1), attacked by the Mongol-Tatars in the times of the Batu Khan invasion of Russia, are well-known. The bones of the defenders there were associated with the remains of fortifications, while bones of elderly men, women, children and disabled were found

within buildings inside the Kremlin. Traces of such a distribution were also found in the archaeological layers of the Tver Kremlin, although they have been significantly damaged over the past centuries (5). Here we describe the skeleton of an elderly man suffering from cerebral palsy who died in the collapse of a building which was supposedly burned down during the siege of Tver by Batu Khan hordes in 1238.

Historical account

Wooden stronghold, Tver Kremlin, has been built at the confluence of the river Volga and its right tribut, river T'maka in the 12th century along with the foundation of the city of Tver in about 1135 AD. Invading Kievan Rus' in the 13th



Figure 1 Map showing the position of cities, mentioned in the article.

century, Mongol-Tatars destroyed numerous Russian cities. One of the invasions (1236-1240), commanded by Batu Khan and Subutai, involved the Volga River Region. Here, on March 5th, 1238, one of the units of Batu Khan army sieged and ransacked Tver, burning it to ashes (6). The

wooden Kremlin was rebuilt sometime between 1238 and 1285. Destroyed and rebuilt several times on the course of the turbulent Russian history, Tver Kremlin was finally dismantled after the Great Fire in 1763 (7).

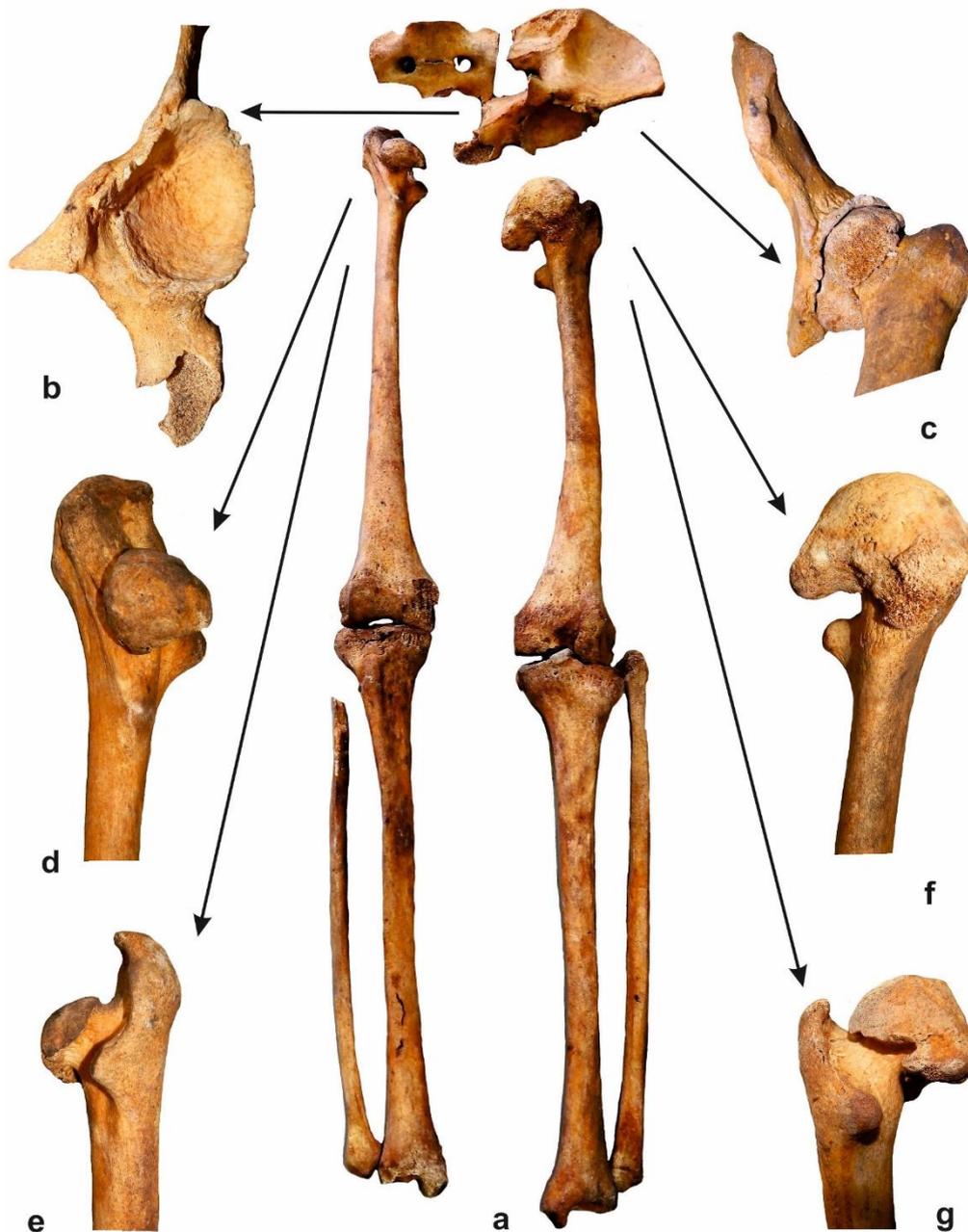


Figure 2 Fragments of the skeleton of the 50-60 years old man, deformed by cerebral palsy: (a) front view of the remains; (b) left acetabular region; (c) left hip joint; the proximal part of the right femur (d) cranially, and (e) caudally; the proximal part of the left femur (f) cranially, and (g) caudally.

Materials and methods

I studied a partial human skeleton (Figure 2), found among the collapsed remains of a burnt building by the rescue excavation team of the Tver Science and Research Archaeology and Restoration Centre in the Cathedral Square of the Tver Kremlin in 2015. The skeleton was sexed by the preserved pelvic bones; the potential height was calculated from tibia bones, which were least deformed by the disease. Several vertebrae, fragments of the ribs and bones of the right forearm, found in the same collapsed building, could have belonged to the same individual. They are not illustrated here as I am not completely sure of their identity.

Results and discussion

The bones available for research and belonging to an elderly man are illustrated in Figure 2a. Dystrophic and other changes, most likely related to cerebral palsy, affected mostly the femurs and the hip joints (Figure 2b, c). The limited use of the legs led to the underdevelopment of the femoral necks, as well as femoral shafts, especially their proximal parts. The right leg was underdeveloped to a greater degree; the underdevelopment concerns both, the size of the articular surface of the femoral head (Figure 2d, e, compare with Figure 2f, g), and the diameter of the femoral shaft. The femur of the left leg is more powerful and laterally curved as the result of a greater load falling on it. Despite the deformation of the articular surfaces of the hip joint due to the limited mobility of the hind limbs, this mobility persisted nevertheless until the death of the individual, not allowing the full articular synostosis. In the absence of the remaining bones of the skeleton, I cannot judge the posture of the individual; I can only speak of the limited mobility in the hip joints. The person obviously hobbled, supporting the body weight mainly with the left leg, while the right, longer one, was lesser loaded. The weakness of this leg, as well as the general underdevelopment of both legs, most likely were compensated using the crutches.

The man who lived with the disability until the age of 50-60 years was rather tall for his time, 173 cm (8, 9), although, due to the twisted posture, his real height could only be guessed. His death is apparently associated with the collapse of the building in a fire of siege of 1238 (Khokhlov AN, pers. comm.). The absence of thermal changes on the bones exclude the direct contact of the body with fire; perhaps the man was at the very

foundation of the structure (underground chamber) and was buried under collapsed structures, protecting him from the fire. Fragments of the skeletons of an elderly woman, a girl, and a child of 6-7 years old, found in the same collapsed building, bear traces of an exposure to the fire.

Conclusion

An elderly man, who suffered from cerebral palsy, most probably died in the collapsed building during the siege of the Tver Kremlin by the hordes of Batu Khan in 1238. Found at the very bottom of the structure, the body of a disabled person was not exposed to the fire, unlike the bodies of an elderly woman, a girl, and a child who died in the same house. Unsuitable for the protection of the city these people died in the building where they were hiding.

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