

Review of human bone remains from Smolensk necropolis (19th century, Tver, Russia): excavations of 2018*

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Abstract

Human bone remains from 19th-century Smolensk necropolis (Tver, Russia) are analyzed. Age, sex, and height distribution is close to that of 18th-century necropolis of Tver. Although with caries, most of the buried show the sign of improved oral hygiene as their teeth lack calculus, characteristic for the Tver population of earlier times. Some pathologies and traumas are described.

Keywords: Archaeoanthropology; necropolis; cemetery; traumas; pathologies; Tver; Russia

* Author is responsible for language correctness and content.



Introduction

The earliest mention of the Smolensk Necropolis, which was located on the south-eastern outskirts of the city of Tver (Figure 1, 2) refers to 1760. Quite soon, in 1765, this necropolis was identified as the main city cemetery. A wooden church was built here. After a couple of decades, it was replaced by a stone church in honor of the Smolensk Icon of the Mother of God. The cemetery has expanded several times during its existence. The largest expansions were carried out in 1873 and 1916. In the cemetery, which existed for almost three centuries, several generations of Tver residents found their resting place. These are the people

Although designed mostly for the Orthodox, the necropolis also had Catholic, Muslim, and Jewish sections. The Smolensk necropolis was closed in 1931. In 1955 its territory was set aside for the construction of a school (on the foundation of the destroyed church) and other buildings.

A small part of the cemetery was excavated in 2018. Analysis of human bones from this excavation adds to the data on medieval and modern cemeteries of Tver (1-3).

Materials and methods

Bone remains of 32 individuals in a varied state

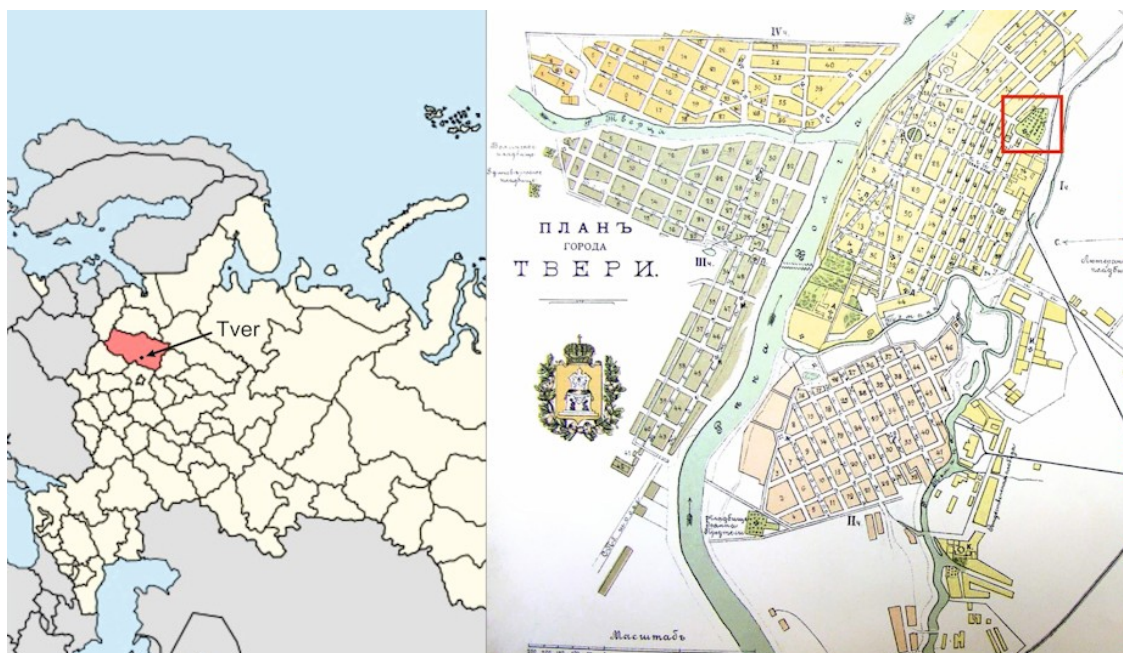


Figure 1 Map of Russian Federation, Tver Region and Tver (1913) with the Smolensk necropolis (in the red square).

who, after the terrible fire of 1763, rebuilt Tver from scratch in stone and made it, according to many people, including Catherine the Great, the most beautiful city after St. Petersburg. The social composition of those buried here was quite diverse: from well-known and high-ranking people to ordinary people, from educated to illiterate: officials, merchants, tradesmen, peasants, landowners, priests, doctors and teachers, scientists, and even the prince Yu. N. Volkonsky. Here rested the participants of all the wars in which Russia was involved: from the Napoleonic wars to the Second World War.

of preservation have been investigated on the course of the research (Table 1). 20 individuals are associated with graves, while the rest are identified by a few scattered bones. Age, sex and height (when possible) of buried were determined using traditional methods, mentioned elsewhere (1). Special attention was paid to manifestations of traumas, diseases, pathologies, and metabolic disturbances. Bones analyzed are coming from 19th century graves (A. Miretsky, pers. comm.).

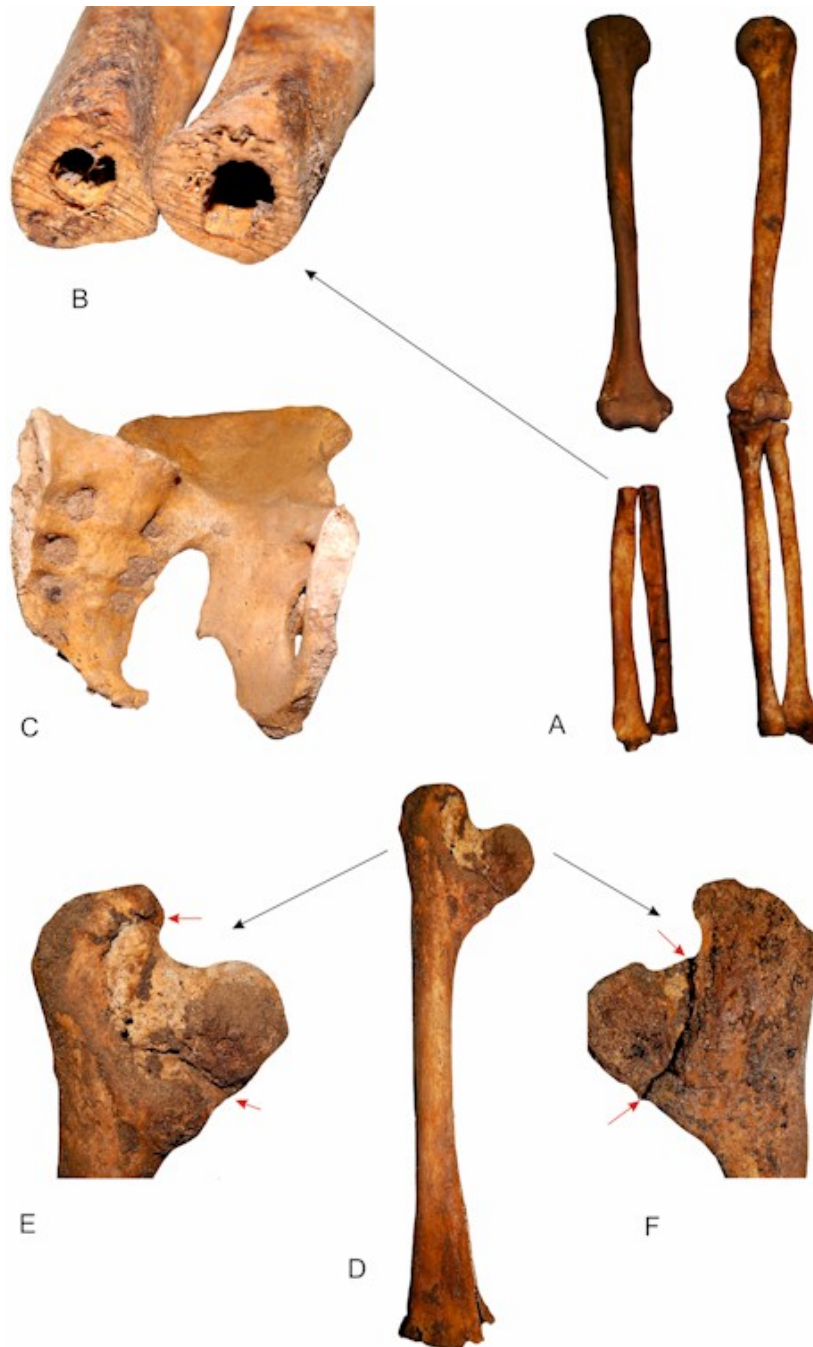


Figure 2 Traumas and pathologies. (A) Sawn-off right forearm of the 25-35 years old male with (B) the unhealed surface of sawing; (C) the ossification of the left synostosis iliosynsacralis in the same individual; (D) right femur of the senile woman with the broken neck and the false joint (E) cranially and (F) caudally (red arrows).

Results and discussion

Human bone remains belong to 13 males and 14 females and 5 children of undetermined sex

(Table 1). Adult and mature individuals dominate and are equally represented in the sample (Figure 3). Category infans (infans1+infans2) holds the second place, followed by senilis.

This distribution is quite a normal situation for medieval and later-times cemeteries of Tver and Tver region (1-3). The absence of individuals from the category juvenilis is hard to explain and almost definitely related to the size of the sample. A similar situation was recorded in Zatveretsky Posad (3). Height was determined for 13 individuals. The average height for men is $166,5 \pm 0,5$ cm, for women $157,4 \pm 0,2$. Men are slightly shorter, and women are slightly taller than individuals from 18th-century cemetery of Zatveretsky Posad (3). However, a small sample does not allow to do any reliable generalizations.

No.	Sex	Age (years)	Age category	Height (cm)
1	♂	75-85	Senilis	165,8±3,7
2	♀	45-50	Maturus	154,8±1,9
3	♀	40-50	Maturus	-
4	♂	25-35	Adultus	172,3±1,3
5	♀	70-80	Senilis	162,3±2,9
6	♂	55-65	Maturus	168,4±1,9
7	♀	25-30	Adultus	161,9±1,2
8	♀	45-50	Adultus	160,3±1,9
9	♂	25-30	Adultus	-
10	?	10-11	Infans2	-
11	?	0	Infans1	-
12	♂	45-55	Maturus	167,8±1,8
13	♀	40-50	Maturus	-
14	♀	35-45	Adultus	153,0±1,5
15	♂	45-55	Maturus	167,2±2,8
16	♀	25-30	Adultus	150,2±2,2
17	♀	40-49	Maturus	162,6±1,5
18	?	6-7	Infans1	-
19	♂	70-80	Senilis	157,9±1,5
20	?	1.5-2	Infans1	-
21	♀	35-40	Adultus	-
22	♀	45-55	Maturus	-
23	♀	35-40	Adultus	-
24	♀	35-40	Adultus	-
25	♀	45-55	Adultus	-
26	♂	45-55	Maturus	-
27	♂	45-55	Maturus	-
28	♂	45-55	Maturus	-
29	?	7-14	Infans2	-
30	♂	35-40	Adultus	-
31	♂	55-65	Maturus	-
32	♂	20-25	Adultus	-

Table 1 Sample.

The analysis of the dental system shows typical for the time and age alterations. Caries most often developed between last premolar and first molar, and between second and third molars of both jaws. The lack of dental calculus in most cases is in contrast with the heavy dental calculus of most of the buried in the cemetery of Zatveretsky Posad (3).

Among the pathological changes is the ossification of the left synostosis iliosynsacralis in adult 25-35 years old male (Table 1: No. 4) (Figure 2C). Most of the premolars and molars of this individual were destroyed by caries, indicating the generally poor state of health. His left forearm was sawed off in the upper quarter (Figure 2A). That happened just before the death or after the death as there are no traces of healing (Figure 2B). The right femur of the senile woman (Table 1: No. 5) has traumatic changes (Figure 2D). The broken femoral neck was not relocated and formed the false joint (Figure 2E, F).

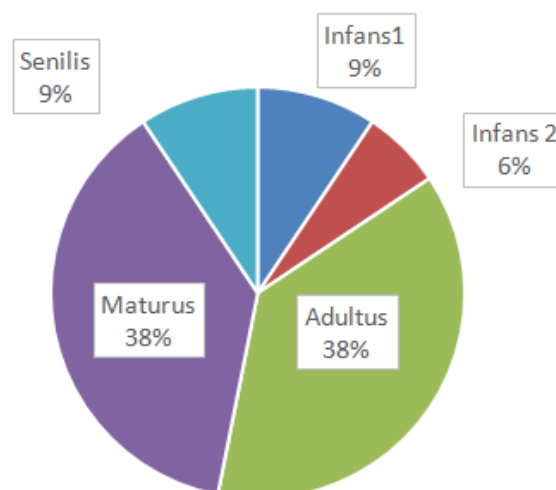


Figure 3 Distribution of buried by age categories.

Conclusion

Although restricted, the data on human bone remains from the Smolensk necropolis of 19th century is close to that of Zatveretsky Posad of 18th century, displaying general trends in the age, sex, and height of Tver population. Although with caries, most of the buried show the sign of improved oral hygiene as their teeth lack calculus, characteristic for the Tver population of earlier times.

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