

Review Articles

The Population of Serdica During the Late Antiquity (IV-VI A.D.) According to Anthropological and Archaeological Data

Vanyo Panchev

Institute of Experimental Morphology, Pathology and Anthropology with Museum, Bulgarian Academy of Sciences

*Corresponding author e-mail: vlpanchev1@gmail.com

Burial facilities and bone remains of people who lived in antiquity are a valuable source of archaeological and anthropological information: about the age and sex distribution of past population and the lifestyle of people who inhabited corresponding territory. Skeletal remains reveal traces of various pathological conditions, traumatic injuries and signs of medical treatment. Complex analysis finds clues for ethnic and religious affiliation and social status of the deceased. The current review aims to summarize available anthropological and archaeological data about population of Serdica and to assess its structure during the Late Antiquity (4th-6th c. AD). The paleoanthropological material from the Serdica's necropolises is insufficient to draw reliable conclusions about the demographic structure (age and sex distribution, age specific mortality and average life span), lifestyle of the ancient population, pathological processes and causes of death. It can be assumed that the average life expectancy in adults is not much different from that of the Roman period.

Key words: Serdica, paleoanthropology, Late antiquity, Western necropolis, Eastern necropolis

Introduction

During the Late Antiquity of the present Bulgarian territory (mostly parts from provinces Thracia and Moesia Inferior), dozens of towns have been established and nowadays are partially or completely studied. Serdica continues its development from previous period and is mentioned in historical sources throughout the whole Late Antiquity [26]. The history of the Roman town begins with the fall of Thracian lands under Roman authority after 45 AD. During the reign of emperor Traian the settlement received urban status and the name of emperor's family – *Ulpia Serdicae* [8]. The

town is important trade, administrative and spiritual center during the Roman and the Late Antique periods [9]. The chronological border of the study covers the time from the end of 3th-beginning of 4th to 6th c. AD. During this period many changes in the Roman Empire and in the Balkans took place, which had led to a positive change in the development of Serdica [5]. The new status of the capital of the province of Inner Dacia, the adoption of Christianity as equal (Milan edict of 313 AD), as well as the proclamation of Constantinople as capital by Constantine the Great accelerated the development of the ancient town. Historical events such as the Church council of 343 AD. and the invasions of Hun tribes from the middle of the 5th c. AD left their mark on the image of the city and its population [26].

From archaeological and anthropological perspectives, the burial facilities and bone remains of people who lived in past periods are a valuable source of information about the sex and age distribution of buried; about the life of the people who inhabited the corresponding territory; about various pathological conditions, traumatic injuries and signs of medical treatment (trepanations), about the ethnic and religious affiliation and social status of the deceased, etc.

The current review aims to summarize available anthropological and archaeological data for the town of Serdica and to assess the structure of its population during the Late Antiquity (4th-6th c. AD).

The study focusses on the published anthropological data from the East and West necropolises of Serdica [2, 3, 7, 12, 20, 24, 25], as well as from the Late Antique mausoleum and burials in the Lozenets district [10, 11, 18, 21, 23, 27]. In achievement of more detailed picture, the data from the already studied synchronous necropolises of on the territory of Bulgaria are also examined [14, 15, 16].

Archaeological data

Archaeological studies have so far contributed to the clarification of the main construction periods of the town [1, 4]. The topography and planning of the ancient city are largely clarified, and the cited two urban necropolises are localized and explored (still partially).

The Eastern Necropolis has been the subject of research since the end of the 19th century [24]. It is located about 170 meters from the fortified territory. The necropolis is used for a long period of time (from the last decades of 2th – the beginning of the 3th c. AD to the 16th-17th c. AD). During this long period, according to the available archaeological information it is assumed that various burial rites (pagan, Christian and Muslim) have been applied. In the center of the necropolis rises the iconic Church of St. Sophia, as a result from at least three major reconstructions [5].

Serdica's Western necropolis was discovered in the beginning of last century by B. Filov [1] and has been investigated for more than a century, but remains studied to a lesser extent [12]. It develops in Southwest direction, near the West city Gate. Like the Eastern one, the Western necropolis developed around on other basilica. The studies carried out so far have identified three vaulted tombs, dated to the late 4th and 5th c. AD, 38 burial facilities and seven tombstones – of the Early Christian community, some of them presenting church officials [12]. In 2018 part of Western necropolis is excavated at „Solen pasar“ site [25]. Remains of 24 individuals, buried as Christians are discovered and dated in 4th to 5th c. AD.

In the Lozenets district, during studies in 1954, a part of a massive building was discovered, which was interpreted as a basilica. In 2001, after a comprehensive study of the same building, it was established that it was a Late Antique family mausoleum of a wealthy citizens, which functioned from the last quarter of the 4th to the first decades of the 5th c. AD [10]. Excavated graves from mausoleum area in 2020 were published recently, as well as burials in its vicinity in Lozenets district [11, 18]. After these finds could be supposed that a necropolis developed also in South direction of ancient Serdica in Roman period and Late Antiquity, which is important addition to the information from already known Eastern and Western necropolises.

Another excavated mausoleum is located in present Stefan Karadzha district [6]. It is part of villa complex in vicinity of Serdica and includes four burial chambers. From architectural point of view it presents a similar plan as the one in Lozenets.

A number of epigraphic monuments in Latin and Greek, also provide valuable information about the population of Early Christian Serdica [17]. Most often, these are Christian tombstones and construction inscriptions with information about the origin, profession and religion of ancient inhabitants.

Anthropological data

The excavations of burial complexes provide anthropological material, which study contributes to the reconstruction of processes, which took place in the population of the Late Antiquity town. The paleoanthropological investigations provide detailed information about the age and sex of buried, their anthropological type and physical development. Human bones retain signs of various pathological changes and incidents of human influence on the body, conducted ante- or post-mortem.

Anthropological studies of the population of ancient Serdica have been carried out since the beginning of the 20th century [2, 3, 7]. Compared to the investigations of Late Antique populations studied from the other necropolises unearthed in the Bulgarian territory, those from Serdica are scarce. This is due to the location of the necropolises (under the modern center of the capital) and poor preservation of human bone remains of Late Antiquity in the specific soil conditions.

In the 20th century, major paleoanthropological studies were associated with excavations within the Eastern necropolis [2, 3, 7]. Skulls of eight individuals (a child and seven men) from a Christian tomb have been discovered and studied [7]. By the anthropological characteristics of the skulls, male individuals fall into the groups of adults (*Adultus*, 20-30 years) and maturs (*Maturus*, 40-50 years). Skulls are meso- and brachyocrane and are not racially homogeneous. Due to their poor preservation, no more extensive analyses and conclusions have been made [7]. A partially preserved dolichocrane skull with trepanation has been studied. The probable reason of the procedure is the treatment of neuro-mental illness [3]. The patient did not survive the procedure. From historical sources it is known that surgical trepanations in the past have been carried out in connection with the treatment of traumatic wounds, nervous or mental illnesses. By metric and descriptive traits of the skull, the individual is identified as an adult man (between 25-30 years). Due to the absence of the facial skull, race identification is impossible. This is one of the few known cases of skull trepanation in Bulgaria and Serdica in particular and presents a technique which

has not been used in other known cases [22, 28]. The find shows advanced medical technique, practiced in the Roman Empire that the local Serdician medicals were familiar with [3].

In recent years paleoanthropological studies have also been carried out on the territory of the Western necropolis of the town, with the bone material from two tombs (II and III) and 7 graves [12, 13, 20]. The identified men split into the groups of adultus (20-40 years) and maturus (40-60 years) and women in the group of adults (20-40 years). In two of the buried (a male and a female), the age at death was defined at about 20 years, and for all others death occurred at the age of over 20 years. Traces of various pathological processes have been identified on the bone remains, the most common being dental pathologies (paradontosis and carious changes of the teeth), dystrophic changes of joint surfaces (spondylosis and arthrosis). Evidences for the anthropological type of buried are scarce, only height being achieved for a few male individuals due to incomplete and fragmented material [20]. It is reconstructed to vary between 165.8 and 172.52 cm (according to the Pearson-Lee formula) and 172.45 to 177.52 (according to the Trotter-Glaeser formula). Recently studied individuals from „Solen pasar“ site present a case of possible artificial deformation of the head in one child (gr. № 9, *Infans I*) and mongoloid influence in features of the skull of an adult male (gr. № 12) (unpublished material provided by Victoria Ruseva to whom I am grateful). These specifics could be a result of infiltration in Serdica of elements from arriving populations in Europe during the Great migration of peoples.

Paleoanthropological material from the Late Antique mausoleum in Lozenets district presents eight individuals – two children between 5 and 7 years (age group of *Infans I*), one men in the senile age, at about 60-65 years, two men and two women at about 45-50 years at death (in the age group *Maturus*) and a woman at younger age, in group of adults, at about 35-40 years [27]. The height of the buried individuals is determined from the bones of the postcranial skeletons. Men fall into the category “tall” (182.05 cm /174.07 cm), and women in the category „medium“ (166.32 cm/157.58 cm), according to formulas mentioned above. According to the metric and descriptive traits of the skulls, the authors assign them to the Southern European racial type, with predominant of Dinaric-Mediterranean characteristics [27]. Latest anthropological analyzes from Lozenets mausoleum gives information about woman (30-40) who suffered from initial form of disability with limping gate acquired after trauma [21].

More detailed information about Late Antiquity populations from the present Bulgarian territory provide paleodemographic studies for other investigated urban necropolises such as those of Augusta Trayana, Abritus, Kabile, Kaliakra [14, 15, 16, 19]. From the analyses, the higher number of men in adult and elderly age, with life expectancy between 42 and 47 years makes an impression. On average, men in their 20^s lived up to 43.9 years. For women, life expectancy is lower, in average of four-seven years and they are expected to live up to 42.7 years. This observation is associated with their higher mortality rate in the age group of adults (20-40 years), explained with complications during pregnancy and childbirth [14, 19]. High infant mortality, specific for preindustrial populations is also reported, in average it varies between 25-30 and 40-45 % for buried at the age 0-14 years in most studied necropolises (Kabyle, Kaliakra, Augusta Traiana, Koprivlen). In most cases relative number of buried in the age group of *Infans I*, in the interval of 0-4 years

is higher [14, 15, 19]. It is assumed that high mortality rates are due to factors such as hygiene level, medical development and living environment [14]. In the studied populations, there are variations in the height of individuals. For men it is from medium (165.5 cm) to high (173.3 cm), and for women – below average (150.7 cm) and medium (153.7 cm). A pathological processes established among the Serdician society, have also been found in the other studied populations from Late Antiquity [16, 20, 21] – dental pathologies (presence of dental calculus, periodontal changes, and carious changes in the teeth), degenerative joint disease (spondyloarthritis and arthritis). Common in adolescent age (14-18 years) is the osteoporosis of the upper orbital wall (cribra orbitalia), which is associated with anemia of various origins. Pathological conditions are also traumas, mainly fractures of the long bones of the limbs, possibly a consequence of physical impact. Paleopathological findings are an indicator of living conditions, diet, work activity, lifestyle and social situation of the studied population [2, 3, 14, 15, 16, 19]. The study of pathological changes of bones can contribute in clarifying the causes of death or the state of health of the individual in life. Paleopathological analysis shows relatively good health of populations during Late Antiquity and the presence of favorable living conditions with high level of hygiene practices and medicine.

The carried out racial-typological analysis of the Ancient populations shows an affiliation with the Southern European racial types with a predominance of marks of the Mediterranean race.

The discovered and studied so far paleoanthropological material from the necropolises of Ancient Serdica is insufficient to draw reliable conclusions about the demographic structure (age-sex distribution, average life span) and lifestyle of the population of the ancient town, pathological processes and causes of death. It can be assumed that the average life expectancy of Late Antique Serdicians was not much different from that of the Roman period, according to the calculations of Boev, Kondova, Cholakov – 42 and 47 years. The estimated life span for men is 4-7 years higher than that of women. Men were medium to tall, and women were middle and below average stature. Dental pathologies (presence of dental calculus, periodontal changes and carious changes of the teeth), degenerative-dystrophic changes of joint surfaces and traumatic injuries were common. In general, the Late Antique populations, which inhabited our lands had a relatively good health condition. The individuals belonged to the Southern European racial type, and there are also dinaromediteran variants.

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