

Case of pott's disease in recently investigated middle age series

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Find from skeleton found in grave B 50-1, necropolis N 3, Zlatna livada, IX-X c. AD, male, 40-50 years at death, is analyzed. On T 11 - T 12 is ascertained a pathological change, result of Pott's disease, most characteristic marker for tuberculosis infection on spinal cord. Find appears as a confirmation of presence of this infection in studied population, which is not a unique case for Bulgarian middle-age series.

Lytic changes on human skeletal remains are registered in many paleoanthropological series, providing information of development of bacterial-fungal infections in past populations [5, 10]. Pott's disease appears as most advanced form in development of lytic changes in vertebral column and these changes are emphasized as characteristic marker for presence of tuberculosis infection of individual and respectively, dissemination of this disease in population [10].

Key words: necropolis N 3, Zlatna livada, Middle Age, tuberculosis

Material and Methods

Recently investigated middle age series provided finds of vertebra with specific lytic changes, characteristic for developed Pott's disease. Skeleton from grave B 50-1, necropolis N 3, near village of Zlatna livada (Table 1), excavated in the season 2011, dated

Table 1. Available material, preservation. L – left; R – right

Bone	preservation	Bone		preservation	Bone		preservation
Cranial vault	fragmentary	Scapula	R	fragments	Pelvis	R	fragments
Face	fragmentary		L	fragments		L	fragments
Dentition	fragmentary	Clavicle	R	complete	Femur	R	fragments
Cervical vertebrae	5		L	complete		L	fragments
Thoracic vertebrae	complete	Humerus	R	complete	Tibia	R	none
Lumbar vertebrae	4		L	complete		L	complete
Ribs	fragments	Radius	R	complete	Fibula	R	none
Sternum	fragments		L	complete		L	fragments
Sacrum	fragments	Ulna	R	complete	T, MT, F	R	none
			L	complete		L	
		C, MC, F	R	P			
			L	P			

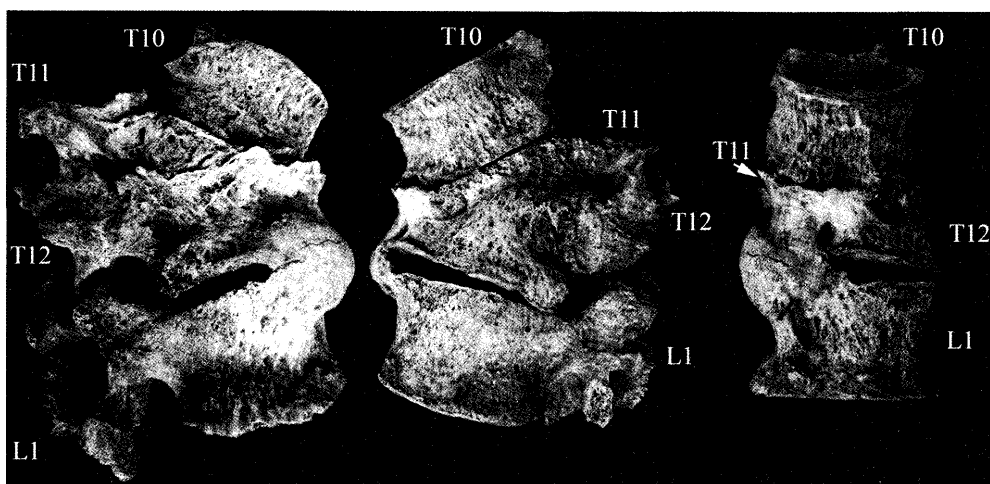


Fig. 1. T 10 – L 1, individual from grave B50/1, Zlatna livada, 3. Right and left lateral and frontal views

in IX-X c. AD [19] presents a similar find. Its age-sex identification is achieved after appropriate methods: auricular surfaces relief assesment [8]; cranial sutures obliteration stages after Olivier-Simpson [15]; complex of sexual dimorphism [1], cranial bones markers after Ferenbach et al. and Buikstra and Ubelaker, [15], standard tables for bone measurements [3, 7, 14]. Pathological changes were registered after methods, summarized in Aufderheide and Rodriguez-Martin and Ortner [2, 10].

Results and Discussion

The individual identifies as male, at 40-50 years at death. On the right parietal and on the occipital bone of the fragmented skull are found two button osteomas. The endocranial surface shows pronounced pits from arachnoid glands, the supraorbital region and scull vault are affected by *cribra cranii*, frontal and maxillary sinuses showed no changes. Dentition is affected by advanced caries, found on five teeth, high level of tooth abrasion and periodontal changes. Bones of the postcranial skeleton present developed arthrosis in shoulder, elbow and wrist, more pronounced in the left elbow and similar changes in hip, knee and left ankle joints, where bilateral asymmetry in development was not possible to assess, as bones of right side remained unrepresented. Vertebral column is affected by spondylosis, most pronounced in thoracic section. On femurs and tibiae is found hyperostotic layer.

In this skeleton T 11 and T 12 are ankylosed with characteristic change of form of T 11 with collapsed anterior wall and triangular form in lateral view (Fig. 1). On the T 12 are visible osteolytic changes with abscess openings, T 10 shows “woven” structure of cortical bone (Fig. 1). These changes on skeleton are characteristic for tuberculosis infection, especially for its type of Pott’s disease. They are concentrated in one, most affected vertebra revealing unifocal development of reaction, pointed as typical for adults [10]. After these defects could be supposed long chronic period of the disease, in which, destruction of the spongious bone of the T 11 developed to eventual collapse of the frontal wall. As it is already noted by many authors [2], most frequently affected from skeletal manifestation of tuberculosis infection appears the spine cord, where changes

after Pott's disease are most pronounced. Investigation of cases with developed Pott's disease can't lead to real demographic distribution of tuberculosis infection in the population, but this lesion remains the surest marker of its presence [2, 10].

Four cases of Pott's disease and one of tuberculous coxitis are reported from other studied series, dated in Bulgarian Middle Age as Tuhovishte [4, 6], Kabile, the series from XII-XIII c AD [17], Kavarna, the series from the XV-XVII c. AD [4, 6] and Odartsi [16]. For series from territory of Hungary, dated in the middle ages, is reported a relative rising of cases of osteotuberculosis, including Pott's disease in the VII-IX c. AD [9, 11].

Conclusions

The studied find presents a case of tuberculosis infection, in necropolis of Zlatna livada 3, which ascertains, presence of this infection in population. Similar finds are reported for other Bulgarian middle age populations, revealing, that they did not differ to the known data for Hungary in the period and other European countries.

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