

Molecular genetics and biomedical research of Berel mounds

The preliminary results of molecular genetics and anthropological studies of human remains found mixed physical type of man: it contains both Caucasoid and Mongoloid components. It accords with the data of anthropology. Absolute predominance of Caucasoid components in the region is characteristic for early Sakas time. Two individuals out of the burial mound № 11 having dominant component are considered Caucasoid. It has 84.6 %, according to preliminary data. Ancient Berel residents used mercury for keeping buried bodies.

Comparing the results of the molecular genetic analysis of four biological samples from the mounds 11, 25 and 34 gave different genetic structure on the Ak-Alakha and Upper Kalzhin. However, in order to make any conclusions from it seems impossible (Dzisyuk, 2003, p. 18-21).

The break, recorded in the parietal skull of a man, and numerous broken bones fused ribs and vertebrae, gives evidence about the harsh military man's life, and how he did not die a natural death. Indirectly, this assumption confirms preliminary forensic nature of head injuries: a man is likely was tried to provide medical care after being injured, to extract from the wounds of bone fragments and blood clots, as evidenced by the traces of incomplete trephination. The Burr hole (diameter about 70 mm.) on the skull of a man is the most obvious evidence of post-mortem manipulation with the body. In addition, the surfaces of other bones of the postcranial skeleton (sternum, humerus, scapula, vertebrae and iliac bones) were found short cuts and longer scratches from some sharp instrument. Probably this is an evidence of that the soft issue (skin and muscle) was excised in certain places, and the depth of these excision in some place reached the surface of the underlying bone, where the tool had left traces in the form of cuts and scratches.

In the course of biomedical research and soft tissue remains of the men found some of the disease.

Interesting hypothesis concerning the age of genetics and relationship of the buried: the woman was a bit older than the man, whose age is defined in the range of 30 to 40 years. It is believed that a man and woman were close relatives: a greater degree of probability is the son and mother, more or less – brother and sister. Marriages between close relatives in early societies are theoretically allowed, except for the marriage between the mother and her children. Such examples are documented in ancient Egypt. At Shijie (28) is reported that the Hun “with the death of father and brother they take wives for themselves to avoid the extinct genus, and therefore, although there is incest in the Huns, but labor did not cease” (Bichurin, 1950, p. 58). Something like that, with regard to the Oghuz was mentioned by Ibn Fadlan.

Given the small difference in the age of the buried, it would appear that the man's body was buried a little later. However, this version is problematic. We have adopted as a working hypothesis, therefore, it is necessary to implement in the future a more thorough analysis of all data.

Analysis of the buried men revealed *Ancylostoma duodenale*, *Trichocephalus trichiurus*, *Strongyloides stercoralis*, *Enterobius vermicularis*, *Ascaris*

lumbricoides. Person could become infected with these invasion on local natural pestholes existed in prehistoric times and currently (Baizhanov Berkinbay, Samashev, 2000, 49-51b).

Zainolla Samashev, Berel, Almaty, “Taimas” publishing house, 2011.