

Different Origin of Tocharians and Yuezhi: Advances in Archeology and Genetics

Lanhai Wei^{1,3}; Hui Li^{1,3}; Wenkan Xu^{2,3}

Background

Origin of Tocharians and their relationship to Yuezhi (月氏) had been debated for more than one century after the discovery of the Tocharian language. This debate led to great progress on the scope and the depth of our knowledge on the origin of the Indo-European language family and the Indo-Europeans. However, archeology evidence supporting or refuting the claim that they are related has been lacking.

Methods

We will present some advances that have been made on a Xiongnu (匈奴) and Yuezhi archeology site in Northeast part on Xinjiang, China during the last decade. We will summarize the recent achievements concerning the complex development and processes of prehistoric cultural patterns in Xinjiang during the Bronze Ages and early Iron Age, 2,000 B.C. to 200 B.C. On the background of cultural change at this region, we will investigate the different potential origins of the Tocharians and their relationship to Yuezhi, including ancient DNA data from this region.

Results

Xiongnu tombs in East Tianshan- Barkol grasslands, dating to 200±70 B.C., were identified with the use of cultural factor analysis. Cultural elements of human sacrifices in these tombs are related to archeological sites in the same region in an early point of time. Based on the analysis of written records from ancient China and archaeological excavations in the last decade at the Yuegongtai-Xiheigou (岳公台-西黑沟) sites which date 500 B.C. to 200 B.C., we will propose that these are the remains of a Yuezhi group. By comparison with all others archeological sites in Xinjiang for this period, it is possible to show that Yuegongtai-Xiheigou sites and those of the cultures that may be related to Tocharians, including Xiaohe (小河) Culture, Charwighul Culture, differ from each other. Ancient DNA data also shows great genetic diversion in prehistory Xinjiang.

Conclusion

With this study we will propose that the Tocharians and the Yuezhi are of different origin based on the archeological discoveries of the last decade. We will conclude that the interaction and fusion of Tocharians and Yuezhi in the historical age has to be reevaluated.

1. MOE Key Laboratory of Contemporary Anthropology, School of Life Sciences, Fudan University, Shanghai 200433, China

2. Hanyu Da Cidian editorial offices, Shanghai 200040, China

3. Shanghai Society of Anthropology, Shanghai 200433, China