

Thursday, 7 June(Afternoon)
Venue: Kyushu U. Nishijin Plaza

Title of Session

Anthropological and archaeological studies on the relations between South Korea and Japan from the Early Iron Age to the Three Kingdoms of Korea

Organizer

Hisashi Fujita and Hiroko Hashimoto

Session Abstract

There has been an active interaction and exchange of information in the field of archaeology between South Korea and Japan. Anthropological studies in South Korea had been limited because only a limited amount of ancient human skeletal remains had been excavated in the country. Approximately 10 years ago, a considerable amount of ancient human skeletal remains was excavated in the Nukdo site. We were involved in the organization and analysis of these remains. In 2004, we received a grant-in-aid for scientific research from the Japan Society for the Promotion of Science and began full-scale research on ancient skeletal remains from South Korea. In the process, we achieved a closer interaction with the Korean archaeological researchers and obtained many academic findings. This section discusses (1) the cooperation between the Japanese and Korean researchers, (2) analysis of anthropological characteristics of Nukdo and Yean-ri human skeletal remains (from South Korea) from the perspectives of paleopathology, cranial morphology, and dental characteristics, (3) comparison with Northern Kyushu Yayoi and Jomon people from Japan, and (4) immigrants from the Korean peninsula and spread of agriculture. There will also be a discussion from the archaeological perspective regarding the characteristics of the Nukdo and Yean-ri sites, subsistence of people of those periods investigated from excavated artifacts, and various problems involving the nation building in South Korea. In addition, the social structure of the third to sixth century will be reconstructed from information about sacrificial burials performed during that period in South Korea.

Timetable

13:30~13:40: Session introduction

13:40~14:00: Hisashi Fujita: Nukdo and Yean-ri human skeletal remains from a paleopathological perspective” and “spread of agriculture to Japan

14:00~14:20: Kengo Ohno and Yoshinori Kawakubo: Craniofacial affinities between populations in western Japan and southernmost Korea around the Yayoi period

14:20~14:40: Hiroko Hashimoto: Morphological traits of Mandible and Dentition in human remains from Bronze Age to Iron Age between South Korea and Japan

14:40~15:00: Cho Seong won: The nature of the Tomb Site Yean-ri by considering of excavated relics

15:00~15:15 Tea & Coffee

15:15~15:35: Kim Su Whan: Human Sacrificial Burial in Ancient Korean Society

15:35~15:55: Chikara Inoue: The historical background of establishment and

declination at NukDo site in South Korea

15:55~16:15: Akira Seike: The Burial Principle of the Chief's Tumulus in the Kofun Period: The Influence of Paekche—

16:15~17:00: Discussion

Abstracts

Nukdo and Yean-ri human skeletal remains from a paleopathological perspective” and “spread of agriculture to Japan

Hisashi Fujita

(Department of Anthropology, Niigata College of Nursing)

The human skeletal remains No. 117 were excavated from the Nukdo site in South Korea. The remains had signs of spinal caries such as destructive inflammatory reaction causing porous vertebral bodies, previous inflammatory reaction, and fusion of thoracic vertebrae. In Japan, the oldest known case of bone tuberculosis was from the Yayoi period, which corresponds to the time period of the Nukdo human skeletal remains. For dental caries, the prevalence was low at 6.4% in the Nukdo human skeletal remains and 8.1% in the Yean-ri human skeletal remains from the time period corresponding to the Kofun period in Japan. In the Korean peninsula, agriculture had already begun during the time Nukdo people lived. Thus, Nukdo and Yean-ri people knew about agricultural farming. However, their caries rates were low, likely due to their strong dependence on hunting and gathering because the Nukdo and Yean-ri sites are close to the coast. In Japan, the caries rates were high in immigrants of the Yayoi period in Northern Kyushu. The Kofun human skeletal remains were excavated from the Miura Peninsula in Kanagawa Prefecture. The main subsistence of these people was thought to be hunting and gathering. The caries rate was low at 5.2% in the Kofun skeletal remains found mainly in the Kanto region. This finding supports the concept that their main subsistence was hunting and gathering. In Japan, even if agriculture began to spread widely in the Yayoi period, Yayoi and Kofun people must have thought about the resources of the places where they lived. They practiced a wide variety of subsistence activities. Some people practiced subsistence that greatly depended on hunting and gathering. Other people made changes to their subsistence activities toward agriculture.

Craniofacial affinities between populations in western Japan and southernmost Korea around the Yayoi period

Kengo Ohno and Yoshinori Kawakubo

(Department of Anatomy and Anthropology, Saga Medical School)

Northern Kyushu and southernmost Korea face each other across the Tsushima strait, and it is suggested that these two areas had various exchange from ancient times. Previous anthropological studies indicated that modern Japanese have been formed by a

hybrid of the Jomon population who were aboriginal Holocene inhabitants of Japan and the immigrant Yayoi population. This study examined interpopulation variations in the craniofacial morphology of human skeletal remains from Japan and South Korea. Three-dimensional geometric morphometric analysis was applied to 43 adult male crania in 4 cranial series from various western Yayoi and eastern Jomon sites in Japan, Yean-ri and Nukdo sites in southernmost Korea. The anatomical landmarks of craniofacial skeleton were digitized using a MicroScribe G2X contact digitizer in order to capture craniofacial shape and size components. Each set of the landmark was superimposed using generalized Procrustes analysis to remove the effects of translation and rotation, and then submitted to a principal component analysis. At first, 27 landmarks of the facial skeleton were used for analysis. The result showed that the principal component score is in general classified into two groups, the Jomon group and the Yayoi, Yean-ri and Nukdo groups. Compared to the Jomon sample, the craniofacial shape of the Yayoi, Yean-ri and Nukdo tends to display distinctly higher upper face, orbit and nasal region. However, only Yean-ri 41 skull was located slightly near the Jomon population. As a further analysis, the morphology of nasal skeleton was analyzed. However, the second analysis revealed that Yean-ri 41 skull doesn't have a prominent nasal skeleton which is one of the characteristics of Jomon people. The narrow and flat nasal bone of Yean-ri 41 is close to Yayoi rather than Jomon. Further investigation is required to clarify the population history of South Korea.

Morphological traits of Mandible and Dentition in human remains from Bronze Age to Iron Age between South Korea and Japan

Hiroko Hashimoto
(Primate Research Institute, Kyoto University)

The prehistoric South Korea and Japan people actively exchanged goods with people lived in other area. In recent years South Korea has a lot of human bones have been excavated. The aims of this study are to determine whether the dental measurements and the non-metrical dental traits can be used for migration analysis, and to determine similarities and dissimilarities in prehistoric South Korea and Japan.

A site being a basic unit for the dental measurements analysis, the statistical features were examined differently for each sex. The T-test was carried out to compare the differences in the diameters of mesio-distal diameter and bucco-lingual among the sites. When no significant difference of variance between two sites was shown, the Student's T test was applied. And when a significant difference of variance was shown, Welch's T Test was applied. For determining intra-site variations, z-scores were calculated based on the average data.

Non-metrical dental traits (NMDT) aimed to evaluate variations in non-metrical dental traits between geologically diversities from South Korea's site and modern, the Neolithic and modern China's site to the a couple of prehistoric and historic Japanese site. Differences in observed frequencies of each NMDT between the sites were tested using the χ^2 test and were summarized into a dendrogram based on the standardized mean measure of divergence (MMD) scores. Three sites: Yean-ri, Nukdo, Tanegashima-Yayoi) indicated similar frequencies for the traits, and the standardized

MMD scores.

This work was supported by the Takanashi Foundation for Arts and Archaeology.

The nature of the Tomb Site Yean-ri by considering of excavated relics

Cho Seong won
(Woori Research Institute for Cultural Properties)

Yean-ri tombs site from Gimhae, South Korea have been dated to the fourth to seventh century AD. Through the excavations conducted by the Museum of Busan National University between 1976 and 1980, it was discovered that they were the graves of common people of the Gaya Period. The types of graves discovered up to now are very diverse including, wooden burial chambers; it have potteries of Gaya type from fourth century to middle of fifth century, stone coffins and jar coffins; there potteries are seen as a strong influence of Silla from middle of fifth century to middle of sixth century, and finally stone burial chamber; from late sixth century to seventh century. Numerous relics such as earthenware, ironware, and personal ornaments were excavated; fishing tools and agricultural tools and so on. Yean-ri people, they started agricultural life, on the other hand they keeps fishing life higher percentage. Yean-ri tumuli are rom coastal areas, their diet may have retained a significant marine component, in fact Yean-ri human skeletal remains, a couple of them have exostosis of external auditory canal.

Human Sacrificial Burial in Ancient Korean Society

Kim Su Whan
(Woori Research Institute for Cultural Properties)

Human sacrificial burial (HSB) is one of the burial customs are found in the Gaya and Silla Yeongnam region, South Korea from late third century to early sixth century. It differs from the literature and records showed that performed the large tumulus HSB in the Gaya and Silla by the outcome of the recent archaeological excavations. Origin of human sacrificial burial is inconclusive opinion in South Korea. One is opinion that began on their own. The other is the direct transmission from the northeastern region of China. The beginning of HSB that the concentration of power associated with the establishment of a strict court rank to the foundation or large amounts of tombs and relics congestion is evident in South Korea. HSB was first confirmed in South Korea in ruins Daesung-dong, Gimhae Gumgwan-Gaya at the end of the third century, up to the fourth century will be enforced only in the main Gumgwan-Gaya. In early fifth century, it found in Gyeongju and Gyeongsan Silla. HSB is spreading tumulus of the country respectively, Dae-Gaya, Ara-gaya and Silla. HSB is believed to have disappeared at once or gradually become early the sixth century in each region. We can be obtained from HSB, the relationship between central and local governments, social change and development of ancient South Korea.

The historical background of establishment and declination at NukDo site in South Korea

Chikara Inoue
(Archaeological Institute of Kashihara, Nara Prefecture)

Nukdo site is located in the Sacheon City of Kyungsang-namdo, South Korea. This site was considered to be the trade centre between Kyushu and Nannang because of the Yayoi and Nannang pottery, and Ban-liang coin excavated from this site.

Previous research had focused only on the interactions regarding the historical background of the establishment and declination of this site. However, I would like to discuss it from a political viewpoint such as the formation of community and country in South Korea.

At the time of the establishment during the early Iron Age, the community was built in the southeast area of South Korea and chiefs in possession of bronze artifacts emerged. They obtained bronze articles, including the bronze dagger, from the more advanced southwest area in South Korea. When the chiefs of the southeast area obtained bronze articles from southwest area, Nukdo site was the intermediary in the trade between the chiefs from the southeast area and the southwest area.

The declination of the Nuk-do site was strongly related to the rise of Byeonjin Guyagok, one of the 12 countries of Byeonhan. The Gimhae area prospered as an international trade harbor from the late 1st century. Byeonjin Guyagok was becoming a central force, controlling small countries and trade centres such as the Nukudo site that trade in the southeast area freely.

The Burial Principle of the Chief's Tumulus in the Kofun Period: The Influence of Paekche —

Akira Seike
(Faculty of Humanities & Economics Kochi University)

In Japan, those who were buried in the same tumulus were siblings all through the Kofun period. But co-burials of a couple are also recorded in written sources. That burial practice was restricted to certain groups of the highest rank and of a foreign origin, and they had the influence of Paekche. But co-burials of a couple were quite uncommon. The Paekche influence was restricted to the highest rank and did not continue for long.