

Stable isotope analysis and radiocarbon dating on human skeletal remains from the Yoshigo shell mound of the Jomon period

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The author investigated radiocarbon ages and carbon and nitrogen stable isotope ratios in human skeletal remains excavated from the Yoshigo shell mound in the Aichi Prefecture. Although a large number of skeletal remains has been excavated from the Yoshigo shell mound, ages of these skeletal remains are still unclear. Radiocarbon dating on human bone collagen can estimate the ages of the individuals, but the precise estimate on marine food dependence is needed to correct marine reservoir effect on radiocarbon dates. This study investigated radiocarbon ages and carbon and nitrogen stable isotope ratios of human skeletal remains from the Yoshigo shell mound during the Late-Final Jomon period. By using the Bayesian mixing model on the carbon and nitrogen isotope ratios, the dietary dependences on marine food of each individual were estimated. Then, the results of radiocarbon dating were corrected. The results of this calibrated ages of human skeletal remains exhibited the ages during the Late-Final Jomon period, and it can enable us to analyze the dietary difference through time.

Keywords: Human skeletal remains, Stable isotope, Diet