Stable Isotope Analysis of the Diet of Romans and Langobards in the Veneto from Late Antiquity to the Medieval Period

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INTRODUCTION

This research focuses on the cultural interactions that occurred in the Veneto, Italy after the fall of the Western Roman Empire and arrival of the Germanic Langobards in the sixth century AD. The Langobards reached the Veneto in AD 568, which triggered multiple conflicts with the native post-Roman and Byzantine populations. After the fall of the Empire, the political economy in northeastern Italy collapsed from a traditional market system to one that relied on localized resources such as fish, domesticated animals, and wheat (C₃ plant). With the Langobard arrival, historical records suggest a heavy reliance on pork, a potential increase in the production of milk (a C₄ plant), and dairy products. The impact that the Langobards had on changing economic and political structures in this area is poorly understood, as existing historical information and the archaeological record is incomplete. Thus, questions remain of the local implications of diet during this period of instability, especially regarding changes in the political economy with the arrival of the Langobards.

Research Questions: This research compares four 4th-6th century AD sites and three 7th-century AD Langobard sites from the Veneto using stable isotope analysis to address the following questions:

1. What were people consuming in the Veneto after the fall of the Western Roman Empire?
2. Did dietary practices change with the arrival of the Langobards in the 7th century AD?

GEOPHICY BACKGROUND

The Veneto is located in the alpine region of northeastern Italy, with Venice, its lagoon, and the Adriatic Sea to the east. All sites sampled are shown below (Fig. 1).

LANGOBARD MATERIAL CULTURE

Evidence of the Langobard presence has been found in burial contexts throughout the Veneto, and include grave goods such as knives, bone combs, belt fittings, and ceramics (Figs. 3-6).

RESULTS

The mean collagen carbon isotopic (δ¹³C) values for the 4th-6th century AD sites are −18.4‰, indicating a predominately C₃ terrestrial diet. Mean nitrogen isotopic (δ¹⁵N) values are 10.9‰, indicating some fish and animal protein contributions (Fig. 13).

The 7th century AD Langobard average δ¹³C value is −15.1‰, indicating a C₄ terrestrial diet (Fig. 13).

DISCUSSION and CONCLUSION

This study shows that diet, after the fall of the Western Roman Empire in the Veneto, was similar to a traditional Roman diet of fish and terrestrial C₃ resources, although some individuals clearly lacked significant protein (Desmonta, Sovizzo, Dueville). Dietary practices appear to have changed with the arrival of the Langobards in the 7th century AD, which shows clear evidence of a significant contribution of C₄ resources such as millet (Sovizzo and Dueville). These results may indicate that the Langobard transition into Italy was stressful on the population, or that the individuals from Sovizzo and Dueville with high carbon values were enslaved Roman/Byzantine populations. Oxygen isotopes will be used to explore these conclusions.

REFERENCES


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