

Osteobiography of Gröf A-21 from Keldudalur, Iceland

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Abstract

Around 1000 A.D., the Icelandic government declared a conversion from Paganism to Christianity for all Icelandic citizens. Due to this sudden change and a lack of official churches at which to worship, many Icelanders built small, family Christian churches on their own land. Keldudalur, a farm in Northern Iceland, is now an archaeological site with the remnants of such a church and cemetery. In 2002 and 2003, 52 Viking-Age individuals were discovered in the cemetery at Keldudalur. One of these individuals, Gröf A-21, possessed multiple lytic foci in numerous locations on the skeleton. The lesions vary in size from 2-10mm in diameter, and are concentrated on the ribs, scapulae, clavicles, os coxae, and vertebrae. Utilizing standard paleopathological methodologies of observation, description, and comparisons with the clinical literature, I undertook a differential diagnosis of the possible etiology of this pathology. Multiple myeloma, a disease which causes atypical blood cells to hinder the production of new blood cells in bone marrow, causes skeletal lesions that match the appearance and patterning found in the remains of Gröf A-21. However, there are other hematopoietic diseases that can leave similar skeletal lesions to multiple myeloma, such as prostatic carcinoma, breast carcinoma, leukemia, etc. When the visible lesions on Gröf A-21 were compared to the characteristics of the various hematopoietic diseases, multiple myeloma seems to be the most likely cause of this pathology. Radiographs would be necessary for a conclusive diagnosis, but the observational evidence suggests a differential diagnosis of multiple myeloma.



Fig. 1: Map of the Skagafjörður, Iceland



Figure 2: Left Clavicle – lesions on acromial end.
Figure 3: Right Scapula – view of lesions on superior surface.
Figure 4: L1 – view of lesions on superior surface of centrum.
Figure 5: Right Rib 6 – lesions on lateral surface.

Figure 6: Right Rib 5 – lesions on inferior surface.
Figure 7: Os Coxae – view of lesions on medial surfaces of the Ischia.
Figure 8: Right Ischium – close-up view of lesions on medial surface.

Introduction

The Viking Age in Iceland was an important time for the Icelandic people, and Icelandic culture. Around 1000 A.D., the Icelandic government officially declared that Christianity was the country's new religion – though some Icelanders had switched from Paganism to Christianity already, the whole country underwent a religious transformation. However, due to this sudden decision by the Icelandic government, official Christian churches had yet to be erected. In order to worship and properly bury their dead according to the new Christian laws, Icelanders began building small churches on their family land (Zoëga 2007). After several generations, when large Christian chapels and churches were finally built, the Icelanders would tear down their private churches and, in some cases, would move their dead family members to new, consecrated ground.

This switch from Paganism to Christianity has generated a great deal of interest among archaeologists, as well as the Icelandic government. Surveys of almost all Icelandic farmlands have been or are in the process of being done in order to ascertain the presence of structures from the Viking Age. In Northern Iceland, a large number of small-scale archaeological excavations have been performed in order to unearth these churches and the cemeteries that tend to be present with them (Zoëga 2007).

Keldudalur (Fig. 1), a site in Northern Iceland, was originally excavated to become the foundation for a tourist building, but the excavation was halted once human remains were discovered. A salvage dig was undertaken, and over the course of two years, 52 graves were discovered within the churchyard (Zoëga 2007). Of those graves, Gröf A-21, contained human skeletal remains with a skeletal pathology that is the focus of this research. Utilizing standard methods from Buikstra and Ubelaker (1994), Zoëga estimates that the remains are those of a male who is 50+ years old (Zoëga 2007).