MASTER FORENSIC SCIENCE – RESEARCH PROJECT

Title	: Post-Mortem Vertebral Deformation: Environmental Impact on Morphological Change Over Time
Keywords	: Vertebrae, spine, bone, deformation, post-mortem, shape analysis, environmental conditions
Forensic Expertise Area	: Forensic Medicine
Start Date	: ? (asap/na)
Host Institute	: Eurofins/Radboudumc
Department/Team	: -
Supervisor	: Vidija Soerdjbalie-Maikoe
Email address	: soerdfme@kpnmail.nl
Telephone number	: ?
UVA Examiner	: ?
UVA Coordinator	: Arian van Asten/Yorike Hartman

Short Description

This literature review investigates the morphological changes that occur in vertebrae post-mortem under different environmental conditions. Factors studied include exposure to open air, freshwater, saltwater, fire, and various soil types. The research aims to determine how the duration of exposure influences the extent of these changes and whether the resulting deformation occurs uniformly or in localized patterns. By understanding how environmental factors affect vertebral morphology after death.

Key References

1) Specimen size effect in the volumetric shrinkage of cancellous bone measured at two levels of dehydration - ScienceDirect
2) Effects of dehydration-induced structural and material changes on the apparent modulus of cancellous bone - ScienceDirect
3) Full article: Water uptake and swelling in single trabeculæ from human femur head

Required/Recommended skills and expertise

- ?
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Visuals

