

# Evaluation of facial asymmetry using soft-tissue thickness for forensic purposes [Evaluación de la asimetría facial mediante el grosor de tejidos blandos para propósitos forenses]

Muñoz S.R.T.

Cantín M.

Rojas F.J.P.

Galdames I.S.

Facial reconstruction for forensic sculpture aims to reproduce the face of an individual for identification. This technique is based on the knowledge of the facial soft-tissue thickness, which differs in terms of sexual dimorphism. However, in terms of asymmetry, the real significance of the soft-tissue thickness on both sides of the face is not considered to make an approximation of the morphofacial characteristics of an individual. This study analyzed the facial tissue thickness of 32 adult Spanish corpses of both sexes in six bilateral cephalometric landmarks through the needle puncture technique, comparing the measurements of right and left sides. No significant differences were found when comparing the soft-tissue thickness on the right and left sides in the total sample ( $p < 0.05$ ), or when comparing the values in men and women ( $p < 0.05$ ). The facial morphology is created by internal and external forces exerted on the soft tissue and influenced by their evolutionary development in vivo, where asymmetry parameters have a genetic and muscular determination, which in normal individuals do not represent a significant difference in the process of reconstruction of forensic sculpture, and can reliably standardize the entire information of facial thickness to the right or left side of the face.

Facial asymmetry

Facial reconstruction

Medicolegal identification

Tissue thickness