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Identification of unknown skull
MD (Community Dentistry) - 1999   **D 692**

Identification on a dental basis depends on a variety of factors increasing with the number of man-made and natural changes to the human dentition. In the human body, the most noticeable changes, particularly for recognition, are above the neck. This makes it more important for the forensic experts to be familiar with the measurements of features above the neck and their relationships to another. Measurements of distances between accepted landmarks of the skull and the face could be used to establish proportions. These proportions become the basis on which a face is built. This is why, in additions to the tissue thickness with racial variations, these standard ratios of facial dimensions are used for the reconstruction of faces. This is basically done in four ways: from photographs, from plasticine,from video-superimposition, and from computer based programs. The common links between the skull and the face are ratios, of which some are standard and some are not. Standard ratios are those that are documented where similarities occur in a larger percentage of people. The non-standard ratios are those which are undocumented and have wider variation among individuals, the latter is the thrust of this study. Therefore the research components of this thesis is to: Identify non standard ratios, Assess the feasibility of their use for identification, Examine the degree of their sensitivity for an initial identification by elimination, Document the degree of their specificity. Data from a set of non- standard facial ratios, based on distances measured between documented landmarks, from a series of samples of different sizes have been selected for this study. The statistical analysis establishes the specificity and the uniqueness of a group of facial ratios. A feature emerging from the statistical study of these non-standard ratios is that, it establishes the uniqueness and the specificity of non-standard vertical and horizontal facial ratios when considered collectively.