

Methods

Thirty dry adult human skulls were investigated. All the skulls were obtained from collection of the museum of anatomy in the College of Medicine Al-Nahrian University. Three marks were allocated on the left and right sides of the norma lateralis of these skulls namely the tip of the mastoid process, the asterion, and the region of the suprameatal triangle (posterior border). Three imaginary lines were considered in this study representing the connections of these three pointed landmarks. The lines were designated as following (figure 2):

D1= the distance between 'asterion' and the tip of mastoid process in the direction of posterior border of mastoid process.

D2 = the distance between asterion and the suprameatal triangle (posterior border).

D3 = Mediolateral mass of the mastoid. "The depth of the sigmoid sinus".

To measure the distance between surface of suprameatal triangle and the sigmoid sinus plate, the skull was oriented in the Frankfurt plane and the drilling was done between surface of suprameatal triangle and the sigmoid sinus plate in line of direction of maxillary process of temporal bone (its upper) border. Line D1 was considered as the representative for evaluation of the anteroposterior growth for the mastoid process.

Line D2 was considered as the representative for evaluation for the region of the suprameatal triangle.

Line D3 was considered as the representative for the evaluation of the

depth of the sigmoid sinus plate from the surface of suprameatal triangle.

Measurements of D1 & D2 were done manually using Helios milimetric vernier (Inox). The anatomical landmarks were first defined and located, and then relevant measurements were done. D3 was estimated by measuring the length of a broom's bristle after passing it through the canal drilled into the suprameatal triangle.

The drilling was performed by using an electrical drill machine (Mizuho ika, kogyo co. Model No. m65-2c No. 79099 with drill size 2.8 mm).

Each of the artificial foramens which formed in the dry skulls was closed using the white cement powder to keep the normal skull morphology for teaching purposes.

The length of the three lines is demonstrated in 60 regions (right & left sides) of 30 human skulls. Statistical analysis was done using the statistical software package SPSS 16. The analysis was performed by using the chi square test for interpretation the results obtained.

The association between two categorical variables was assessed for statistical significance by chi-square test. P-values less than 0.05 were considered as statistically significant. The linear correlation between variables was measured by spearman's rank correlation coefficient. P values less than the 0.05 level of significance was considered statistically significant ⁽¹⁰⁾.