

Table 2: Statistical Correlations and the probability (p values) of D1, D2 and D3 on the right side and its significance

	Correlation	p-value	significance
D1+D2(R)	0.824636598	P=0.00001	High-sign
D1+D3(R)	0.911606408	P=0.00001	High-sign
D2+D3 (R)	0.804874981	P=0.00001	High-sign

Table 3: Statistical Correlations and the probability (p values) of D1, D2 and D3 on the right and left sides and its significance

	Correlation	p-value	significance
D1 (R&L)	0.786915	P=0.007	High-sign.
D2 (R&L)	0.683902	P=0.029	Significant
D3 (R&L)	0.753688	P=0.012	Significant

Discussion

The measurements of (D1+D2), (D1+D3) and (D2+D3) showed statistical significant differences. By finding D1 or D2 radiologically, we can calculate the approximate depth of sigmoid plate (D3) value.

The complication of perforating the sigmoid venous sinus during surgical mastoidectomy may possibly be avoided by a preoperative assessment for the depth of the sinus plate.

It is very important to know the exact site of sigmoid sinus (depth of the sinus plate). If we irrigate or perform modified or radical mastoidectomy this may accidentally damage the bone of the sinus plate leading to severe venous bleeding. If the depth (D3) can be assessed by measuring D1 and D2 on lateral X-rays of the heads, we may avoid this dangerous complication.

This study was designed to assess the profitability of using simple parameters that could be obtained from the plain x-ray of the skull as an indicator for the depth of the sinus plate. The statistical analysis demonstrates correlation between the depth of the sinus plate (D3) and the two other parameters namely D1 and D2 (pearson correlation). It was shown that the depth of the sinus plate could be

speculated from the measurement of D1 and D2.

This is achieved by radiological assessment of Macewen's triangle as a surgical landmark ⁽⁹⁾. Many morphometric measurements were performed between surgical landmarks especially in the mastoidectomy ⁽⁷⁾.

The suprameatal approach is a simple and safe technique that does not endanger the facial nerve nor the chorda tympani ⁽⁵⁾.

If the depth can be assessed by measuring D1 and D2 on lateral X-rays of the heads as this study prove that we can avoid the dangerous complications which occur in the normal mastoidectomy.

Another point: the reason of using D1 and D2 to estimate D3, in other words, we built our hypothesis that measuring the first two lines might be an indicator to the third line, because many studies were done to clarify the topographic anatomy and clinical significance of the suprameatal triangle but no one mention the use of these criteria to know the depth of sigmoid sinus plate ^(2, 7, 11).

References

1. Williams PL and Warwick R. Gray's Anatomy. The Anatomical Basis of Clinical Practice. 36th ed. Churchill Livingstone. Edinburgh, 2008; pp. 483-572