LL6 present		Impaction	LL6 absent	
% of LL8s	Number		Number	% of LL8s
10	66	Vertical	15	2
52	337	Mesioangular	105	16
5	34	Horizontal	3	0.5
13	85	Distoangular	3	0.5
	552	Total	126	

Discussion: There was no significant difference in impaction patter of left or right. The presence of L6s did influence the impaction pattern of L8s. Presence of L6s was associated with significantly higher proportion of horizontal and distoangular impactions.

doi:10.1016/j.bjoms.2011.03.213

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The incidence of radiographic signs indicating close proximity of inferior dental canal to lower wisdom teeth on orthopantomograms

K. Shakib*, A. Navai, B. Visavadia

Northwest London NHS Hospitals, United Kingdom

The SIGN guide lines and others have suggested that the following radiographic features can be associated with a significantly increased risk of nerve injury during third molar surgery:

- diversion of the IDC,
- darkening of the root where crossed by the canal,
- interruption of the white lines of the canal.

The aim of this study was to assess the incidence of the above 3 radiographic signs on orthopantomograms.

Method: A retrospective of 1005 consecutive digital orthopantomograms (2010 sides) was carried out. When lower wisdom teeth (L8s) were present then the presence of any of the above signs, seen under magnification, was noted.

Results: 459 male and 542 female.

Mean age 39.4 (range 5–95).

L8s were present 661 (65%) on right and 649 (64%) on the left.

The incidence of any of the 3 radiographic signs was:

Right			Impaction	Left		
% +ve	+ve sign	Total		Total	+ve sign	% +ve
37%	30	81	Vertical	81	32	40%
33%	151	457	Mesioangular	442	153	35%
43%	36	83	Horizontal	88	55	63%
40%	18	45	Distoangular	37	13	35%
36%	237	666	Total	648	254	39%

Conclusions: The radiographic signs were present in 40.1% of orthopantomograms where L8s were present. No difference in sides was noted. This figure is significantly higher than measurements in CT and direct anatomical studies. This approach therefore represents a blunt tool which overestimates the risk of inferior nerve damage. Other investigations such as Cone-Beam CT represent a more accurate way of assessing this risk.

doi:10.1016/j.bjoms.2011.03.214

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Preservation of temporalis during cranioplasty: technical note

S.D. Sharma*, B. Lim, R. Bentley

King's College Hospital, London, United Kingdom

Introduction: Cranioplasty procedures are necessary to restore cranial vault form after defects are created due to trauma, infection or neurosurgical intervention. During neurosurgical temporoparietal craniectomy procedures, the temporalis muscle is detached from the underlying skull. In cranioplasty reconstruction, it is advantageous to salvage the temporalis muscle and re-attach it to the cranioplasty plate to avoid temporal hollowing.

Surgical method: Using DICOM data obtained from CT scanning and with the aid of an acrylic biomodel, the Maxillofacial Prosthetics Department at King's College Hospital constructs individualised cranioplasty plates. Surgery to insert the cranioplasty plate involves accessing the skull defect via the previous craniectomy scar. Once the temporalis muscle is exposed at the level of the superior temporal line, it is carefully dissected from the dura to reveal the bony margins of the defect. The periosteum is incised around the defect and the cranioplasty plate can then be adapted for insertion. Dural hitch sutures are placed, after which the cranioplasty plate is secured using a counterscrew technique. The temporalis muscle is subsequently reattached using vicryl sutures through pre-fabricated 2.0 mm diameter holes in the cranioplasty plate, spaced 15 mm apart.

Results: To date, we have performed 44 cranioplasties in our centre using this technique of temporalis muscle attachment, and have had no cosmetic complications of temporal hollowing (mean follow-up 1.8 years).

Conclusions: We have demonstrated a safe, quick, and effective method for anchoring the temporalis muscle by using a custom made titanium cranioplasty implant, in order to minimise the post-operative complication of temporal hollowing.

doi:10.1016/j.bjoms.2011.03.215