Other journals in brief

A selection of abstracts of clinically relevant papers from other journals.

The abstracts on this page have been chosen and edited by John R. Radford.

OBSTRUCTIVE SLEEP APNOEA

Biomechanics of the upper airway: changing concepts in the pathogenesis of obstructive sleep apnea

Susarla SM, Thomas RJ *et al.* *Int J Oral Maxillofac Surg* 2010; **39**: 1149–1159

Disorders in central nervous system regulation may have a role in obstructive sleep apnoea (OSA).

Not only does OSA result in daytime somnolence, but it has been linked with high impact medical events such as myocardial infarction and stroke. The authors of this paper ask the question why 10–20% of patients with OSA do not respond to surgical maxillomandibular advancement? They argue that, in addition to the usual links of obesity with OSA, myoneural factors (nerve endings in muscles) are important in maintaining upper airway patency. For example, disorders of the hypoglossal nerve, that innervates the genioglossus muscle, compromise pharyngeal integrity. The engineering concept of loop-gain ('magnitude of the system response relative to the magnitude of the disturbance') is also discussed. A high gain system responds disproportionately to hypoxia/hypercarbia, whereas a low-gain system stabilises the condition.

DOI: 10.1038/sj.bdj.2011.169

NERVE DAMAGE AFTER IMPLANT SURGERY

Pharmacologic management of trigeminal nerve injury pain after dental implant surgery

Park JH, Lee SH *et al.* *Int J Prosthodont* 2010; **23**: 342–346

Use of gabapentine, with or without tricyclic antidepressant medication, in order to manage nerve injury following implant surgery.

This case-study reports a pharmacological approach for patients who have experienced pain or abnormal sensation after implant surgery. Eighty-five patients presented with symptoms of nerve injury to an orofacial pain clinic in a secondary care setting in Seoul, Korea. The treatment and outcome of 47 of patients are reported. Initially they were prescribed gabapentine. If this was ineffective, they were also given tricyclic antidepressants. They received medication for 12 weeks. Those who received such medication within 3–6 months of nerve injury had a better outcome. Over one quarter of the patients had complete pain relief after receiving gabapentine, with or without tricyclic antidepressants. The authors state that these observations should be verified with a controlled clinical study.

DOI: 10.1038/sj.bdj.2011.170

SLEEP-DISORDER BREATHING

Questionnaire-based study on sleep-disorder breathing amongst edentulous subjects in a university oral health center

Park JH, Less SH *et al.* *Int J Prosthodont* 2010; **23**: 503–506

Those subjects who removed their dentures at night reported an increased experience of sleep-disorder breathing although this was not statistically significant.

The removal of full dentures at night minimises denture-induced stomatitis. Yet it has been suggested that such an oral health preventative practice could result in upper airway collapse and sleep-disorder breathing (SDB). Using a questionnaire, this observational study compared SDP in 37 subjects who removed their dentures and 25 subjects who wore their dentures at night. The questionnaire (Berlin questionnaire), comprised ten questions and the results of which were used to categorise subjects into either a high or low risk group for SDB. Almost 30% of those who wore their dentures at night were in the low risk group for SDP, whereas 20.0% were in the high risk group (not significant).

DOI: 10.1038/sj.bdj.2011.171

NERVE DAMAGE AFTER IMPLANT SURGERY

Mandibular nerve neurosurgery impairment after dental implant surgery: management and protocol

Misch CE, Resnick R. *Implant Dent* 2010; **19**: 378–386

If nerve damage is suspected during implant surgery, arrange without delay the administration of dexamethasone and referral to a specialist in microsurgical repair.

As the inferior dental nerve has more fascicles (nerve fibres arranged in bundles) than the lingual nerve, the recovery of sensation following injury is more favourable after damage. The more proximal the nerve damage (for example, in the region of the ramus), the greater the risk of permanent neurosensory damage. In addition, nerve impairment is reported to be more common in females and in older people. Neuropathy is minimised, if dexamethasone is administered within one week of the injury. In addition, high dose NSAIDs are beneficial if taken for three weeks, or longer, after the injury. Surgical intervention (decompression, direct anastomosis or nerve grafts), is more predictable if carried out within three months of the nerve damage.

DOI: 10.1038/sj.bdj.2011.172