

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.

Bruxism - sleep

Nocturnal sleep architecture is altered by sleep bruxism

Palinkas M, Semprini M *et al.* *Arch Oral Biol* 2017; **81**: 56–60

Does sleep bruxism impair the night sleep architecture?

Sleep comprises 1) non-rapid eye movement that is also characterised by muscle relaxation, and 2) rapid eye movement with bursts in muscle tone. Rapid eye movement adjusts for sensory perception, neuromuscular function and hormonal rhythms and is the most restorative part of sleep. It is reported that sleep bruxism is experienced by 10% of the adult population and has been linked with insomnia, narcolepsy (poor regulation of sleep-wake cycles) and obstructive sleep apnoea.

The aim of this study was to look for associations between sleep bruxism and sleep architecture. When comparing sleep architecture in those with sleep bruxism and those who do not brux when sleeping, those with sleep bruxism showed a shorter duration of sleep with a significantly higher number of microarousals. In addition, over eighty percent of those with sleep bruxism reported tiredness and sleepiness during the day, and muscle discomfort upon awakening. In this study, the test (n=45) and control subjects (n=45) were paired by age, gender and body mass index. Sleep architecture was measured using polysomnography, the gold standard. These findings were in contrast with those of another study that reported those with sleep bruxism displayed a normal sleep architecture.

DOI: 10.1038/sj.bdj.2017.759

Proportional values – golden ratio

Comments regarding: Radia S, Sherriff M, McDonald F, Naini FB.

Relationship between maxillary central incisor proportions and facial proportions.

J Prosthet Dent 2016; **115**: 741–748.

Tarlow JL, *J Prosthet Dent* 2017; **117**: 701

‘...the mean is a lonely place...’

In this section of the journal (DOI: 10.1038/sj.bdj.2016.446), it was reported that the investigators in the substantive paper (*J Prosthet Dent* 2016; **115**: 741–748) failed to confirm Berry's biometric ratio of 1:16 (maxillary central incisor width to bizygomatic width). The author of this letter challenged this assertion in that the investigators reported a ratio of 1:15.56. In their reply, the investigators asserted that mean values should not be considered in isolation but with standard deviations. They also touch on the rather curious idea that a 'particular proportional value is somehow the secret of esthetics or beauty'. Disregarding cultural influences on perceptions of beauty as well as age, sex, and ethnic differences, such a simplistic approach has little authority.

DOI: 10.1038/sj.bdj.2017.761

Antibiotic stewardship

The antibiotic course has had its day

Llewelyn MJ, Fitzpatrick JM *et al.* *BMJ* 2017; **358**: j3418 doi: 10.1136/bmj.j3418

A barrier to antibiotic conservation?

Not only do worthy bodies such as WHO advise patients to 'always complete the full prescription, even if you feel better, because stopping treatment early promotes the growth of drug-resistant bacteria' but such a message has even instilled itself in the UK curriculum for secondary school children. But what is the evidence? Prolonged therapy may have had its origins when in 1941, Howard Florey's team treated Albert Alexander's staphylococcal sepsis with penicillin. Despite recovering this precious commodity from his urine, when the first course of penicillin finally ran out, alas clinical improvement reversed and he succumbed to the infection.

It used to be 'target selected resistance' because of inadequate antimicrobial dosing, and the use of monotherapies such as in the earlier treatment regimen for tuberculosis. But resistance now occurs when harmless commensal flora (the so called ESKAPE organisms), are replaced by resistant strains (collateral selection); the longer the course of antibiotics the greater the chance of collateral selection. The message is simple; 'Outside hospital...patients might be best advised to stop treatment when they feel better, in direct contradiction of WHO advice.'

DOI: 10.1038/sj.bdj.2017.760

Hypodontia – environmental risk factors

Maternal smoking during pregnancy is associated with offspring hypodontia

Al-Ani AH, Antoun JS *et al.* *J Dent Res* 2017; **96**: 1014 – 1019

‘...maternal smoking during pregnancy is a risk factor for having a child with hypodontia.’

On one hand, mutations in the genes *MSX1*, *PAX9*, *AXIN2*, and *EDA* have been identified in familial forms of nonsyndromic hypodontia, yet environmental factors such as trauma, and children with thalidomide embryopathy for example, also show hypodontia. When odds ratios were adjusted for possible confounders, if the mother smoked ten or more cigarettes each day during pregnancy, there was increased odds that the child would have hypodontia (adjusted OR, 4.18; 95% CI, 1.48–11.80; P = 0.007). In this case-control study that recruited mothers of 89 children with hypodontia with a 1:3 case-control ratio, the number of cigarettes smoked each day, alcohol consumed and caffeine intake was ascertained using a questionnaire. There would appear to a biological gradient, one of Hill's criteria for causation, with increased odds of children with hypodontia with increased maternal cigarette smoking.

DOI: 10.1038/sj.bdj.2017.762