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Dental aesthetics; prosthodontics; conservative dentistry

Color and translucency of *in vivo* natural central incisors

Hasegawa A, Kawaguchi S
J Prosthet Dent 2000; 83: 418-423

Tooth colours may vary from country to country.

Colour is measured by a 3-dimensional system of coordinates: 'L' (luminance or lightness), 'a' (red-green axis) and 'b' (yellow-blue axis). In this study, the labial aspect of one upper central incisor was measured with a computer-linked colorimeter at five central points from the incisal edge to the cervical enamel in each of 87 randomly selected Japanese subjects aged 13 to 84 yrs. Translucency was also measured. Teeth had to be intact and free from obvious discolouration.

From the centre to the cervical region of teeth, there was a direct correlation of L with age, indicating gradual darkening. At all five sites, there was correlation of 'b' with age, indicating gradual yellowing. Only at the incisal site was there an age correlation with 'a', indicating a shift towards red, perhaps because of the effects of attrition; and translucency also decreased with age.

Measurements were also made of 16 shades of a German shade guide for comparison. In these, cervical and incisal sites were darker than the centre sites. Redness and yellowness both increased and translucency decreased from the incisal to the cervical sites. The authors suggest that this European shade guide (the most commonly available shade guide in Japan) does not match Japanese tooth colours, and a more accurate guide should be developed. These findings may have implications for ethnic subgroups in all countries.

Oral pathology

Comparison of clinical and histologic diagnoses in periapical lesions

Kuc I, Peters E et al.
Oral Surg 2000; 89: 333-337

In more than 95% of lesions, the clinical diagnosis was verified.

This study concerned 805 periapical biopsy specimens submitted to a Canadian university laboratory over a 2 year period. Radiopaque and third molar region lesions were excluded. The mean age of patients was 39 (± 16) yrs and 54% were male. More than 1/3 of specimens came from the anterior maxillary sextant, 8% from the anterior mandible, and 12–16% from each remaining sextant.

Pulpal necrosis and sequelae accounted for 98% of specimens, 1% were of endodontic origin with infection or antral involvement, and the remaining 1% were unrelated to these diagnoses.

In 60% of cases, the clinical diagnosis was exact; in 4% it was significantly inaccurate, including clinical diagnosis of endodontic involvement when other lesions were histologically identified. The non-endodontic lesions were: 2 giant cell granulomata, 2 cysts of other origin, 1 benign fibro-osseous lesion, a Pindborg tumour, an odontogenic myxoma and a multiple myeloma site.

Oral medicine

Oral pemphigus: long term behaviour and clinical response to treatment with deflazacort in sixteen cases

Mignona MD, Lo Muzio L et al.
J Oral Pathol Med 2000; 29: 145-152

Steroids dramatically reduce mortality from pemphigus vulgaris, but often have significant side-effects, which may be less serious with this drug.

This is a retrospective analysis of treatment for a disease which is rare but fatal without treatment, and which most frequently is seen first in the mouth (70% of cases). In half of pemphigus vulgaris patients, the mouth is the only site affected, but in others the disease may spread to involve the pharynx, larynx and oesophagus.

Over a 10 year period, 11 women and 5 men commenced treatment in an Italian university clinic with systemic deflazacort (in 14 cases) or methylprednisolone and topical steroids. Other drugs were added if the disease did not respond: in 7 cases, azathioprine was added after 4 weeks.

When the disease was controlled, a reduced maintenance dose was given. The commonest adverse effects of treatment were behavioural, and the authors considered that their patients had less serious side-effects with deflazacort than with other steroids. Cataracts, candidiasis and metabolic side-effects also occurred.

Cariology; dental public health

Parental smoking practices and caries experience in pre-school children

Williams SA, Kwan SYL et al.
Caries Res 2000; 34: 117-122

Maternal smoking is associated with caries in young children independently of social class.

In the 1995 UK National Diet and Nutrition Survey, a nationally representative sample of children aged 1.5–4.5 yrs was identified, and 77% later consented to dental examination. In the present study, 763 children aged 3–4.5 yrs were included, to avoid possible confounding effects of unerupted teeth. Three quarters of children were caries-free.

Parental smoking data were available for 749 children. In 400 cases where neither parent smoked, mean dmft was 0.8 and 79% were caries-free; the mother only smoked in 146 (1.8 and 62%), the father only in 100 (0.8 and 75%), and both parents in 103 (1.5 and 69%). In 121 families there was no father present.

Analysis of all data indicated that in non-manual social classes (325 families), maternal smoking had a significant relationship with child caries, and in manual classes (404) maternal smoking and child age were both related to caries. The authors discuss the possible reasons for the associations, with particular reference to developmental and behavioural aspects.