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Dental pathology; anatomy

Infraposition of ankylosed permanent maxillary incisors after replantation related to age and sex

Kawanami M, Andreasen JO et al.
Endod Dent Traumatol 1999; 15: 50-56

This study of ankylosis suggests that passive eruption continues through and beyond the third decade of life.

From 322 patients with 400 avulsed and replanted teeth, 52 patients with ankylosed maxillary incisors and an uninjured incisor were followed up for an average 4.2 years (range 1–21 years). Ankylosis was diagnosed primarily with a measurement of tooth mobility by Mühlemann's periodontometer. Study models were used to measure infraposition of an ankylosed incisor with reference to a normal incisor.

Mean annual increase in infraposition in males was 0.42 (range 0.19–0.62) mm/year when ankylosis was before age 16, and 0.14 (0.11–0.18) mm/year when it was from 16–19, continuing at 0.07 (0.02–0.21) mm/year up to age 44. In females, comparable figures were 0.58 (0.08–1.0) mm/year when ankylosis was before age 14, and 0.07 (0.00–0.12) mm/year up to 32 years.

The authors consider their findings suggest slow continuous eruption of normal teeth well beyond the age of maturity, and discuss the significance of their findings for treatment of trauma, and provision of implants.

Endodontics

Clinical experience of root canal filling by ultrasonic condensation of gutta-percha

Zmener O, Banegas G.
Endod Dent Traumatol 1999; 15:57-59

In a clinical study of ultrasonic condensation, the success rate was over 90%.

Evidence on ultrasonic condensation has come mainly from studies *in vitro*. A random selection was made of 80 patients attending an Argentine university clinic for root canal therapy. They were aged 18–70 years, and had 90 teeth requiring endodontic treatment, with a total of 181 root canals.

All canals were hand-instrumented using a step-back flaring technique, to a working length of 1–2 mm from the apex. A close-fitting master cone was selected, coated with sealer and inserted by hand until slight resistance was felt. It was then ultrasonically activated and advanced to the determined length.

On completion, radiographs showed adequate condensation to the working length in 93% of canals. In 3%, underfilling was recorded, 2% were filled flush and 2% showed extrusion beyond the apex. Overall success was 93% with partial or complete resolution of 61 out of 65 pre-operative radiolucent areas, and no radiographic change on 23 of 25 teeth without areas. At recall 1.5 years later, there was no clinical discomfort.

Oral pathology

Histological distribution of cervical lymph node metastases from intraoral/oropharyngeal squamous cell carcinomas

Woolgar JA
Br J Oral Maxillofac Surg 1999; 37: 175-180

This study confirms previous findings that tongue tumours may follow an atypical pattern of metastasis in some patients, and recommends a more extensive removal of nodes.

Over an 8 year period, 180 patients received surgery with unilateral neck dissection, and 73 with bilateral dissection, at a Liverpool hospital. No patient had prior treatment of any kind, other than biopsy. Mean age of 165 males was 58 (range 30–88) years, and of 88 females, 63 (33–87). Radical dissections were performed for 33 neck sides, removal of submandibular triangle nodes (level I) and the 3 groups of deep cervical nodes (upper, middle and lower: levels II, III and IV) for 186, and levels I–IV with the posterior triangle nodes (level V) for 107.

Metastasis was least frequent (10%) in tumours of the alveolus, more frequent in buccal mucosa and floor of mouth (30%) and most frequent (60%) in the tongue, retromolar area and oropharynx. Erratic spread was apparent only in tumours arising from or involving the tongue, partly because of direct lymphatic drainage to the jugulo-omohyoid node; and the author advises inclusion of level IV nodes in all these cases, including bilateral dissections where the primary crosses the midline.

Implant dentistry

Peri-implant tissue health in reconstructed atrophic maxillae — report of 88 patients and 470 implants

Kaptein MLA, De Lange GL et al.
J Oral Rehabil 1999; 26: 464-474

This study gives further evidence that maxillary implants supporting overdentures have a greater risk of disease than those supporting fixed bridges.

In 88 patients who had received maxillary sinus lift surgery with iliac crest bone and hydroxyapatite granules, 470 hydroxyapatite coated IMZ implants were placed. In 77 patients with sinus floor <5 mm thick, 433 implants were placed 3–5 months after surgery; and in 11 patients with sinus floor 5mm+ thick, 31 implants were placed immediately after surgery, with 6 more outside the sinus area. Four months later, the first group received 38 overdentures and 39 fixed bridges; and after 3 months, the second group received 4 overdentures and 7 fixed bridges. After 1.8 (± 0.9) years, plaque, gingival indices and probing depths were similar for both groups, though bleeding on probing was significantly greater in the first group. Overdentures had a greater Gingival Index and probing depth, and a tendency for higher plaque scores, though about 25% of abutments showed plaque deposits in all groups compared.