

ORAL SURGERY; RADIO THERAPY

Adjunctive hyperbaric oxygen in irradiated patients requiring dental extractions: outcomes and complications

Chavez JA, Adkinson CD *J Oral Maxillofac Surg* 2001; 59: 518-522

Osteoradionecrosis (ORN) despite hyperbaric oxygen treatment (HBO) was more likely when a greater time had elapsed since radiotherapy.

One prospective randomized controlled trial in 1985 showed HBO reduced ORN from 30% to 5% following dental extraction in irradiated patients. Over a 7 year period in an American hospital, 40 consecutive patients were identified who required HBO therapy before and after dental extraction in a previously irradiated field. Further risk factors for poor healing were identified in 24 patients.

Mean radiation dose was 6,200 cGy, and the time since radiation was 0.5 - 11 yrs (mean 3.7). The HBO therapy was 20 pre- and 10 post-extraction sessions at 2.4 ATA (atmospheres absolute) with 100% oxygen for 90 min with 5 min air breaks every 30 min, on consecutive weekdays.

By 1 month, 6 of 37 patients followed-up had not healed, and at 1 year, 3 of these were still not healed, along with 1 other out of 35 followed-up. These 4 patients had 6 unhealed sockets out of 371 teeth extracted in all subjects. The average time since radiation was then 3.3 yrs in healed subjects and 8 yrs in subjects with unhealed sockets.

DEVELOPMENTAL PATHOLOGY; GASTROENTEROLOGY

Coeliac disease and mineralisation disturbances of permanent teeth

Rasmussen CG, Eriksson MA *Int J Paediatr Dent* 2001; 11: 179-183

Unlike a previous study, this showed no association between the disorders.

A Finnish study in 1986 reported enamel mineralization disturbances (MD) in 96% of 76 children with coeliac disease (CD), compared with a prevalence of 31% in 150 healthy controls (HC). Two years earlier, a Swedish study found that around 70% of CD and HC subjects alike had MD.

The present study compared 40 CD subjects aged 7-25 yrs and under regular care of a Swedish paediatric department with 40 age-, gender- and domicile-matched HC subjects. Respective prevalence of MD was 50% and 38% (NS).

For 33 of the CD subjects who had been diagnosed and investigated before their first birthday, detailed information on growth was available. Those with MD ($n = 15$) were compared with the others, and both subgroups had the same weight reduction from the population norm during the 3 months prior to diagnosis. The authors conclude that neither CD nor its treatment have a significant effect on MD.

ORAL SURGERY; HAEMATOLOGY

Sequelae and complications related to dental extractions in patients with hematological malignancies and the impact on medical outcome

Raut A, Huryn JM et al. *Oral Surg* 2001; 92: 49-55

Survival rate was unaffected in patients who required extraction prior to chemotherapy or bone marrow transplant (BMT)

This was a retrospective study of 388 patients at a large American oncology hospital who had a dental examination prior to treatment for myelodysplastic syndrome, leukaemia or multiple myeloma. Treatments included BMT, stem cell transplant or chemotherapy.

Extractions were performed for 69 patients. During the next 2 weeks, there were 18 complications in 9 patients: delay of BMT or chemotherapy, bleeding, pain, and the need for inpatient treatment or platelet transfusion. When patients without extractions were compared with those receiving extractions and those with post-extraction complications, there were no differences in survival rates (respectively 42%, 32% and 44%) or number of days in hospital for subsequent major treatment (43, 47 and 46).

ENDODONTICS

Clinical factors related to noncompletion of root canal therapy

Caplan DJ, White BA *J Public Health Dent* 2001; 61: 6-13

Subjects with greater oral disease experience were less likely to have completed root canal treatment (RCT).

This study identified 303 patients who were enrolled in a US dental health maintenance organization for 8 years, and received endodontic access treatment for a tooth in the first 2 years. They were subdivided into case and control groups. Controls were those in whom canals had subsequently been obturated ($n=216$), and of these 96 were later extracted. The case group of 87 included all those in whom canals had not been obturated within the period, and 83 of these had been extracted.

Obturated teeth were lost for the following reasons: nonrestorable fracture (30%), periodontal disease (22%), nonrestorable caries (16%), pain or patient request (14%); no reason was identified in 19%. For teeth not obturated after endodontic abscess, respective percentages were: 13, 16, 31, 31 and 8. Five significant variables related to noncompletion of RCT: symptoms within 3 months prior to access, fewer decayed or filled surfaces, whether a tooth was decayed, pockets 5+ mm on the tooth, and more missing first molars in the mouth. The authors suggest that patients with these factors may benefit from careful advice, or perhaps a one-visit RCT.