

steel crowns were placed on the posterior teeth as soon as breakdown or sensitivity occurred and acid etch composite on the anterior teeth when indicated. All children received their treatment under local anaesthesia. SS crowns were

placed on primary molars from as young as 3 years. This paper illustrates the dominant inheritance pattern and variations in clinical manifestation of this genetic condition and discusses the importance of early management

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1

The frequency of repeat general anaesthesia for paediatric dentistry at Liverpool University Dental Hospital

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Aim. To investigate retrospectively the frequency of repeat extractions under general anaesthesia (GA), the pattern of disease and treatment for children who had received GA.

Methods. Records of patients attended GA chairs at Liverpool University Dental Hospital in January and February 2003 for extractions were studied. A data collection form was designed to record the relevant information.

Results. A total of 174 patients were seen for GA extractions with a mean age of 6.5 years. Of those, 22 patients (12.6%) had a history of previous GA extractions with a mean age of 5 years at first GA. The mean interval at second GA was 2.5 years. The main diagnosis for all patients was caries in the primary dentition (80%) and the main reason for the use of GA was lack of patient cooperation (88%), however, preventing long-term phobia in young patient was only found in 12% of the cases. In general, radiographs were taken in 38%, however, children who needed repeat GA, radiographs were only available in 13% at first GA. The mean number of teeth extracted generally was 4.4 compared to 3 teeth at first GA for those patients needed a repeat GA.

Conclusion. Although the frequency of repeat GA is relatively low it still indicate the need of more radical treatment planning, regular use of radiographs when possible and preventive dentistry to avoid the use of unnecessary dental general anaesthesia.

2

Has a preassessment clinic reduced repeat general anaesthetics?

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Aim. A previous audit showed 17% of children were having a second or third general anaesthetic for dental extractions. A preassessment clinic prior to general anaesthesia was set up at this time. The aim of this audit was to determine whether the clinic has reduced the number of repeat general anaesthetics. The objectives were: (i) to investigate the number of children having a repeat general anaesthetic for extractions within 3 years; and (ii) to establish if decayed or heavily restored teeth remained postoperatively.

Method. Patient records of 200 consecutive children undergoing general anaesthetic for dental extractions at the Bristol Dental Hospital from June 2000 were selected. Data collection included identifying which teeth were removed, whether radiographs were taken preoperatively, the presence of decayed or heavily restored teeth post-operatively and whether a repeat general anaesthetic was carried out within 3 years.

Results. Eight patients (4%) had a repeat general anaesthetic within the 3-year period and 50 patients (25%) had heavily restored or carious teeth remaining postoperatively.

Conclusion. The preassessment clinic has significantly reduced the number of children having a repeat general anaesthetic. This is in comparison to the initial audit carried out in 1997 in which 14% of patients had a second

general anaesthetic and 3% a third one. This audit suggests that the preassessment clinic has resulted in better patient care and clinical practice.

3

Parental reporting of the incidence of trauma to the primary dentition

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Aims. To investigate the incidence, causes, and types of primary tooth trauma in the West of Scotland.

Methods. Structured interview of parents and their children whilst waiting for routine appointments in the Departments of Child Dental Health, Glasgow Dental Hospital. All families in the waiting area were invited to participate.

Results. 178 questionnaires were completed. 13% of males and 11% of females had suffered trauma. Trauma incidence did not increase with sibling numbers. The peak incidences of trauma were at age 1 and 6 years and the commonest causes were falls (65%), bicycles (11%), bumping into static objects (9%), and bumping into other children (9%). Accidents occurred in the home (58%), outside (39%), and at nursery (2%). The upper central incisors were injured in 87% of cases. The commonest injuries were crown fracture (36%), avulsion (31%), and luxation (18%). Head and/or body bruises or cuts occurred in 35% of children with a dental injury. The majority of injuries were taken to a dentist and 89% of treatment was conservative.

Discussion. The low incidence of trauma could be due to parental recall or that trauma to primary teeth is largely undetected. It was also surprising that trauma did not increase with sibling numbers and that crown fracture was commonest. Prevention of injuries in the home would have a significant effect on the incidence of trauma.

4

Treatment of anxious paediatric dental patients by a dental therapist

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The aim of this pilot study was to analyse the outcome of referring reportedly anxious paediatric dental patients to a dental therapist for treatment. A sample of 69 child

patients, originally referred to a community dental service by general dental practitioners for treatment using inhalation sedation (37), general anaesthesia (20) or behaviour modification (12), were preselected by a community-based consultant in paediatric dentistry as being suitable for treatment by a dental therapist. The mean age was 7 years with a range of 5–13 years. Data was collected using a specially designed form and then analysed. Of the 69 patients, 56 completed treatment using local anaesthesia alone, while 3 completed restorative only treatment plans with no local anaesthesia. Of the remaining 10 patients, 7 completed restorative treatment while extractions were completed using inhalation sedation, and in 3 cases, only fissure sealants could be carried out and a general anaesthetic was required to complete treatment. In conclusion, it was possible for a dental therapist to provide some treatment for all children in this study, and 59 of the 69 children (85%) completed all treatment in this way. It would appear that the dental therapist has much to offer in providing dental treatment for dentally anxious children.

5

The management of carious primary teeth within the Community Dental Services in Yorkshire

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Aim of the research. To investigate the current view of nonspecialist dentists working within the Community Dental Service (CDS) concerning their management of carious primary dentition in Yorkshire.

Methods. A cross-sectional postal survey was used, consisting of 98 community dental officers in Yorkshire. A detailed questionnaire was designed to obtain information regarding treatment options on various types of carious lesions in the primary dentition based on case scenarios.

Results. In total, data was collected from 69 clinicians, a response rate of 70.4%. The results showed that more than half of clinicians (56.5%) in this study take routine bitewing radiographs as part of the clinical examination. When restoring primary teeth it was found that 76.8% of the clinicians use local anaesthesia routinely. Amalgam restoration was chosen by the majority of dentists as their treatment of choice for both small class I lesions (47%) and Class II lesions with no marginal and pulpal involvement (67.7%). Only 3.4% chose no treatment in class I lesions and none in Class II lesions. The results revealed that 68% of the dentists favoured pulpotomy for pulpally involved deciduous molars with no sign and symptoms and of these 53.3% would place a SSC as

coronal restoration. The most recommended treatment of choice for pulpally involved deciduous molar with pain or abscess was extraction (55%).

Conclusions. It appears that nonspecialist clinicians within the CDS provide a good standard of care for carious primary teeth.

6

Case report of a giant cell granuloma in a child

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Presenting problem. A 9-year-old male presented with a firm, nontender facial swelling of the maxilla that had been present for 2 weeks and had not responded to antibiotics. Clinically the swelling extended intraorally from the 11–54 with 11, 12 and 53 exhibiting increased mobility. Radiographs confirmed a poorly circumscribed radiolucency with displacement of adjacent teeth and root resorption of 53.

Clinical management. Investigations included CT scanning, incisional biopsy and serum Ca++ that confirmed CGCG. The lesion was subsequently excised via an intraoral approach with sacrifice of 11, 12, 13, 14, and 54. A subsequent procedure was carried out extra-orally for residual tumour in the paranasal region. Currently the patient remains well with a temporary upper prosthesis.

Discussion. A Central Giant Cell Granuloma (CGCG) is an uncommon benign lesion affecting the jaws. It occurs predominantly in children and young adults, and may cause local destruction of bone and displacement of teeth. Management is usually curettage or resection, which may be associated with loss of teeth, or in the younger patient, developing tooth germs. Some cases may behave aggressively, particularly in the maxilla where the local anatomy presents problems of adequate surgical clearance. Calcitonin therapy is currently being considered as further therapy in this case as it has been shown to be effective in prevention of recurrences.

7

Undergraduate self-assessment of competency in paediatric dentistry

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Aim of the research. The aim of this study was to determine the level of perceived competency in paediatric

dentistry by final year undergraduates. The study also sought student opinion regarding the value of paediatric dentistry clinics and personal enjoyment of these sessions. *Methods.* Final year students, at the School of Clinical Dentistry, Sheffield, were asked to complete a short questionnaire relating to their paediatric dentistry clinical experience. Anonymity was observed, although each respondent's treatment session was recorded (day am/pm). A graded response, using a visual analogue scale (VAS), was used to indicate self-perceived competency for history, examination and treatment planning, operative procedures, and communication skills (especially in relation to discussing treatment options and GA risks). A VAS score of zero indicated that a student rated him/herself as very incompetent, and a score of 10 indicated a very high level of competence. Students were also asked to evaluate their clinical experience in terms of usefulness (0 = waste of time; 10 = very valuable) and enjoyment (0 = hated clinics; 10 = loved clinics).

Principal results. 31/50 (72%) students completed the questionnaire. Mean VAS scores were as follows: history, examination and treatment planning = 6.5 (SD = 1.42, range = 2.9–9.6); operative procedures = 6.1 (SD = 2.02, range = 0.0–8.9); communication skills = 7.3 (SD = 1.79, range = 2.3–10.0); value of clinics = 6.0 (SD = 2.12, range = 2.2–10.0) and enjoyment of sessions = 6.3 (SD = 2.39, range = 0.0–10.0). There were significant differences in mean VAS scores for value and enjoyment according to the session attended ($P < 0.05$, ANOVA), but not for assessment of competencies.

Conclusion. Final year dental students consider themselves to be reasonably competent in a number of key areas of paediatric dentistry.

8

Introducing the 'Carr-Pack' for placing calcium hydroxide or 'MTA' into nonvital immature permanent incisors

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Aim. To design a combined CaOH/MTA carrier and packer.

Methods. Investigation was firstly conducted to identify the user requirements through detailed problem analysis of placing CaOH and MTA into root canals. Through recognition and understanding of the problem, a brief and a Product Design Specification (a definition of what the

product must be able to do) was developed. This information was used to explore and generate a range of solutions. An evaluation of all the potential solutions was made to select the best ideas for progression. Development of the chosen solutions with consideration of human factors and engineering issues was followed to refine the concepts into a detailed design. Testing with 3D models was required to examine design concepts and prove engineering

principles. Aesthetic and ergonomic issues were evaluated through user examination of mock ups.

Results. Complete design of a combined CaOH/MTA carrier and packer with reloading feature. Full-scale working prototype made for testing.

Conclusions. The development of the 'Carr-Pack' combined carrier and packer – an effective solution for the placement of CaOH/MTA into open apices.

3 Minute Presentations

1

An audit of dentoalveolar trauma presenting at Glasgow Dental Hospital between 2002 and 2004

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Aims. To examine the profile of dentoalveolar trauma in a group of children attending the trauma clinic at Glasgow Dental Hospital from 2002 to 2004.

Methods. A retrospective audit using computer readable data collection sheets was carried out. Data were collected from the case records of 400 children who attended the trauma clinic between 2002 and 2004. Information obtained included patient age at trauma, patient sex, location, mechanism of trauma and type of injury sustained.

Results. 43% were aged between 8 and 11 years. 60% were male. 50% of trauma occurred outdoors and falls were responsible for 49% of injuries. Sporting injuries and assaults were commoner in males. Falls were more common in younger age groups (100% of injuries in children under 1 year). Most trauma occurred between July and September (32%). 58% sustained an injury to the dental hard tissues (54% of these were enamel-dentine fractures and 13% root fractures). PDL injuries were recorded in

82% and injuries to the supporting bone occurred in 4% of the children.

Conclusions. Most dentoalveolar trauma occurred in the summer with falls accounting for the majority of injuries, especially in younger children. Other aetiological factors such as sport, bicycles/scooters and assaults were more frequent in older children. More males than females presented with dental trauma and the most common age group was 8–11 years.

2

Dietary, dental and social characteristics of children with severe tooth decay

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Aims. To investigate the relationship between a diet high in sugar and low in fibre on: dental caries, socio-economic status, nutritional status and large bowel function.

Methods. Cross-sectional study of a random sample of children 3–11 years attending for dental extraction under GA. Questionnaires obtained information on diet and

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