2097 Longitudinal Change in H MP Distance Among Snoring and Non snoring Adults

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Hyoid to Mandibular plane (H MP) distance has been reported to be associated with snoring and obstructive sleep apnea syndrome (OSAS) However no longitudinal studies have investigated from childhood to adulthood the change in H MP distance between snorers and non snorers This study investigated the change in H MP d stance between snorers and non snorers at three different time po nts (pre puberty puberty and adults) The sample consisted of 83 adult subjects (mean age 64 4 ± 5 13 years Male 52 2% Caucasian 100%) who were enrolled n the Bolton Brush long tudinal growth study as children and had lateral cephalometric x rays at either both prepubertal and pubertal ages or at one of those two ages Snoring was assessed at the adult ages through subjective report There were 34 on snorers (mean age 64 22 ± 4 72 years BMI 26 28 ± 4 51) and 49 snorers (mean age 64 31 ± 5 39 years BMI 27 33 ± 4 83) Lateral cephalometric radiographs were used to obtain the H MP distance A cross sectional t test analysis revealed that there was a signif cant difference ($p<0.05$) in the H MP distance between snorers and non snorers at prepuberty and adulthood There was also a trend towards significance ($p=0.058$) at pubertal age A longitudinal analysis using repeated measures ANOVA showed that there was a s gnificant time change in the H MP distance from childhood to adulthood However the small sample size of 30 subjects (13 snorers and 17 non snorers) who had records at all three time points was too small to detect any longitudinal significant difference in H MP distance between snorers and non-snorers From these results, we conclude that H MP distance is generally longer in snorers than non snorers. There is a significant difference cross sectionally in the H MP distance between the snorers and non snorers at prepuberty and adulthood. From childhood to adulthood, there is a significant lowering of the hyoid bone, thus making the distance longer. This study was supported by the American Association of Orthodontists Foundation and the Bolton Brush Growth Study Center

2098 Cephalometric Assessment of Snoring and Non snoring Children

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Reports from the literature indicate that a large percentage of adults with obstructive sleep apnea syndrome (OSAS) have snored since childhood Early recognition of those pred sposed to obstruction might result in intervention that could reduce the development of chronic disease in the future However there have been very few studies investigating anatomic risk factors for snoring in children Therefore the purpose of the present study was to determine if there are craniofacial differences between snoring (S) and non snoring (NS) children The sample consisted of 31 snoring (moderate to loud) and 31 non snoring (never snored) children (mean age 10 ± 2 80% Caucasian 61% female) recruited from the clinic population at Case Western Reserve University and from twelve private orthodontic practices Non snoring subjects were matched to snoring subjects on age gender and ethnicity Snoring was determined using questionnaires presented to parents/guardians Lateral cephalometric radiographs were used to characterize eleven linear and one angular hard and soft tissue measurements. Paired t test indicated significant ($p < 0.05$) differences in hyoid to mandibular plane distance (S 16 9 ± 4 3 NS 13 22 ± 5 1) the width of the airway at the most posterior superior point (S 8 1 ± 4 4 1 NS 11 9 ±3 8) and at its most narrow point (S 5 1 ±2 8 NS 8 0 ± 2 4) The Chi square analysis of the sleep behavior questionnaire revealed several significant differences ($p < 0.05$) Snoring children were more likely to sleep with their heads tipped back breathe through their mouths have enlarged adenoids and report problems related to sleeping These results suggest that snoring children have a narrower anterior posterior dimension of the pharynx at the superior and most narrow points, a greater length from the hyoid bone to mandibular plane, and associated sleep behavior problems. This research was supported by the CWRU Orthodontic Alumni Fund and the Bolton Brush Growth Study Center

2099 Clinical performance of soft start polymerized Class V compomer restorations

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Interfacial stress due to polymerization shrinkage can cause de bonding of composite materials from tooth structures Light cure units with a two level output intensity are considered to reduce internal stress of resin composites Th e aim of this study was to evaluate the effect of soft start polymerization on compomer restorations

104 facial Class V smooth surface caries or abrasion lesions involving primarily root surfaces were se lected from 43 adult patients The cavities were conditioned with the HYTAC OSB primer adhesive system (Espe) Placement of the compomer material followed the instructions of the manufacturer Two polymerization schemes were randomly assigned In **Group A** soft start polymerization was applied while **Group B** used the conventional one level intensity (Elipar Highlight Espe) The restora tions were evaluated by two examiners at baseline and after two years using the Ryge (USPHS) method for the following criteria Retention color match marginal integrity marginal discoloration anatomic form secondary caries post operative sensitivity and gingival response 98 restorations were available for recall at tw o years Statistical evaluation was performed with the χ^2 test

The 2 year recall showed 98 % retention with 94 % acceptable (Alfa Bravo) color match Tactile integ rity was acceptable in 98 % of the restorations Concerning relevant clinical parameters there were no statistically significant differences between the two polymerization schemes None of the restorations led to secondary caries or pos operative sensitivity

It was concluded that the results show promising performance of Hytac in Class V restorations after 2 years. Soft start polymerization does not provide additional benefit. This study was supported by Espe

2100 Atraumatic Restorative Treatment Three years clinical evaluation

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This study was designed in order to evaluate a glass ionomer cement as a restorative intermediate material and as a pit and fissure sealant within an Atraumatic Restorative Treatment (ART) programme Seventy restorations in temporary teeth and forty five permanent molar sealants were performed in a selected 6 to 13 years old children population All teeth were restored or sealed with a conventional glass ionomer cement specially prepared for the ART procedure (Fuji IX,G C)and were clinically evaluated according to modified Ryge s clinical criteria at one two and three years One year results were already nformed (J Den Res 76 Sp Issue 381 and Vol 5 920) Three years results for permanent sealed teeth showed 70% retention rate without secondary caries (alpha rating) For temporary restored teeth considering exfoliated teeth and failed restorations remaining restorations (42) were rated as follows

	A (Alpha)	B (Bravo)
Anatomic Form	34	8
Marginal Integrity	22	20
Marginal Staining	21	21
Secondary Caries	37	5

Fisher s test analysis showed significant differences between anterior and posterior restorations (17 Class III 2 Class II and 1 Class I failed) Several exfoliated restorations were S E M analysed images showed excellent adptation to tooth structures After three years glass ionomer ART represent a valid procedure for community caries prevention and inactivation programmes Supported by G C American

2101 Eighteen month evaluation of ART fillings placed in Chinese preschool children

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The aim of this study was to evaluate longitudinally the status of ART fillings placed in primary teeth under field conditions in Chinese pre school children In December 1996 a total of 170 ART fillings were placed in the pr mary teeth of 95 children aged 3 6 years in a kindergarten in southern China by seven final year dental students working under clinical supervision The material used was a hand mixed glass ionomer Ketac Molar (ESPE) The fillings were evaluated every 6 months thereafter by two independent dentists The evaluation criteria were success (filling present and not needing replacement) and failure (filling dislodged or in need of replacement) In each of the follow up examination over 90% of the fillings were evaluated The results were as follows

		Success rate (%)		
Class	No placed	6 months	12 months	18 months
1	48	93	91	79
2	49	73	63	51
3/4	48	42	37	30
5	25	90	80	79

The differences in success ates between class types were statistically significant in all three examinations (Chi-squared test $p<0.001$) These results showed that the success rates of Class 1 and Class 5 ART f illings placed in primary teeth in Chinese pre school children were high while for Classes 2 and 3 fillings the success rates were lower

This study was supported by ESPE Dental Medizin GMBH & Co

2102 Clinical Evalu ation of a Glass Ionomer based Dentine Adhesive – 2 year results

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The use of glass ionomer based cements for restorations has become widespread but remains restricted because of physical and aesthetic limitations To overcome this problem a resin modified glass ionomer based adhesive Fuji Bond LC (GC Corp Tokyo Japan) was introduced which allows the advantages of glass ionomer technology to be combined with the advantages of resin composite restorative materials The aim of this study was to evalu ate the clinical performance over 3 years of Fuji Bond LC placed in cervical cavities with one of two resin composite materials One hundred caries free non undercut cervical lesions were restored in 13 patients of a mean age 60 5 years (range 33 – 82 y) with Fuji Bond LC and either Estio LC (GC Corp) or Silux Plus (3M) resin composite according to the manufacturer s instructions Material distribution was Estio LC 22 anterior teeth 28 posterior teeth Silux Plus 16 anterior teeth 24 posterior teeth Photographs were taken at 1 1 magnification immediately following insert on and at 6 mo 1 y and 2 y Each restoration was checked for integrity and the photographs were compared against standard photographs for degree of marginal discolouration

At 6 months two restorations had failed At 1 year all of the 95 restorations examined were present At 2 years of the 95 restoration sites 3 could not be evaluated due to extraction of the restored teeth however all other restorations were present

The results indicated a two year survival rate of 98% The two restorations which failed early in the tudy were from a patient where treatment was very difficult Marginal discolouration showed a very minor but significant change from baseline to 1 year for Silux Plus only ($p<0.01$) The degree of marginal discolouration was such that it would not be of clinical significance It was concluded that Fuji Bond LC is an excellent adhesive for restoration of non-c arious cervical lesions, with low marginal discolouration and a very high retention rate (Supported by GC International Japan)

2103 Clinical Evaluation of a New Adhesive System Six Months Results

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This study is a clinical investigation to determine the efficacy of a new adhesive system (Prime & Bond NT (PBNT)) in combination with three different surface treatments (none conditioning (NRC) and acid etch (C36)) The study is designed to evaluate the retention rates of resin restorations in non retent ve cervical lesions A group of 60 patients with caries free erosion/abrasion lesions rece ved 105 cervical restorations according to three different protocols (A) PBNT Dyract AP (B) NRC–PBNT–Spectrum and (C) C36–PBNT–Spectrum Patients and lesions were distributed by age sclerosis of dentin and size of lesion Lesions were cleaned with prophy paste and no further cavity preparation or beveling was done The restorations were placed by three operators according to randomly assigned protocols Clinical evaluations were done by two independent examiners at baseline and six months using modified USPHS criteria Six months data might prov de an indication for cl nical performance as loss of retention mostly occurs at an early stage At present 77 restorations in 44 patients were examined for six months recall Results of the full dataset and correlations will be reported Seven of the restorations seen at recall lost retention distributed over protocol A 4 and B=3 Six of these could be diagnosed as abfraction lesions A=4 and B=2 The overall retention rate was 91% No hypersensitivity or pulpal problems were noted A small number of restorations exhibited a change in color match (3) and marginal discoloration (2) However the latter was usually due to excess resin on unetched enamel These early results suggest excellent clinical performance for the new adhesive system Maximal retention was obtained in combination with an etchant Long term follow up is necessary to demonstrate the durability of the adhesive bonds

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2104 Successful pulpal capping with a dentinal adhesive

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Previous studies have investigated pulpal responses to dentinal sealing and pulpal capping using a dentinal adhesive resin system The purpose of the present study was to investigate if the method allows for conservation of the dental pulp on a routine clinical basis

A total of 18 permanent teeth (17 molars and premolars one incisor) in 16 adult patients aged between 19 and 50 years were included The sites with localized canously exposed dental pulps were sealed with a glutaraldehyd containing dentinal adhesive and a resin bonding agent which was precured (Syntac classic Heliobond Vivadent Schaan Liechtenstein) Using direct and indirect adhesive composite and ceromer restorations the teeth were either immediately restored or within a time period of 10 days Control examinations included questioning clinical inspection and testing for sensitivity to temperature and percussion During control visits after > 1 year following treatment x rays were taken The mean observation penod was 19 months ranging from 7 to 29 months

All teeth remained vital without clinical or radiographic symptoms of pathology during the observation penod None had developped any signs and symptoms of pulp irritation except short term post operative sensitivity No differences were observed between the different restorative methods

The results indicate that pulpal capping with this specific dentinal adhesive resin system may represent a promising method to replace Ca (OH)2 for pulpal protection.