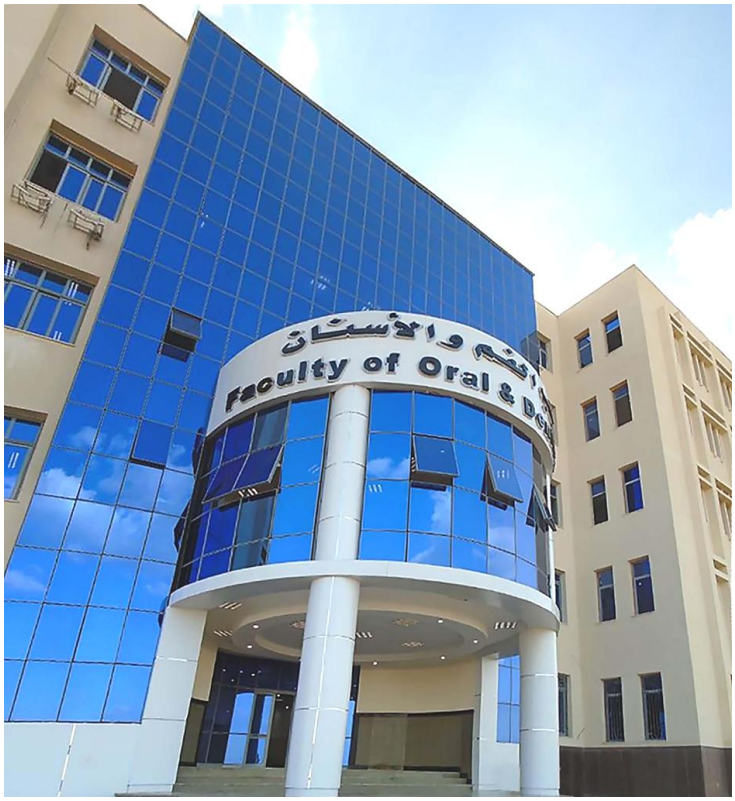
جامعة كفر الشيخ

كلية طب الاسنان



السيرة الذاتية

Biography

الخاصة

بالأستاذ الدكتور

طلعت محمد بسيوني بلتاجي

أستاذ طب أسنان الأطفال وصحة الفم

كلية طب الاسنان - جامعة كفر الشيخ

2021-2020

السيره الذاتية

البيانات الشخصية

الإسم : طلعت محمد بسيوني بلتاجي

تاريخ الميلاد: 1965-12-4

محل الميلاد: شنو- مركز ومحافظة كفر الشيخ

الجنسية : مصري

الديانة: مسلم

الشهادة الثانوية: مدرسة الشهيد عبد المنعم رياض الثانوية العسكرية بكفرالشيخ

الشهادة الجامعية: طب أسنان - جامعة طنطا

الحالة العسكرية: أدي الخدمة العسكرية (قدوة حسنه)

الحالة الاجتماعية: متزوج

الوظيفة الحالية : استاذ بقسم طب أسنان الأطفال - جامعة كفر الشيخ

العنوان: كفر الشيخ - تقسيم 2 - شارع الشهيد محمد الدمرداش الشيتاني - برج صبري الغريب - شقة رقم 1

البريد الالكتروني: tallatbeltagy@yahoo.com

talat.beltagy@den.kfs.edu.eg

الهواتف: منزل: 0473093253

محمول: 01001068922

WebPaege

Dr.Talat M. Beltagy - Google Scholar Citations

http://scholar.google.com/citations?user=i3k9SWMAAAAJ&hl=en

المؤهلات العلمية

1- درجة البكالوريوس: بكالوريوس طب وجراحة الفم والاسنان

- التقدير : جيد جدا مع مرتبة الشرف
- إسم الكلية: كلية طب الأسنان - جامعة طنطا
- موقع الجامعة: طنطا, (المحافظة): الغربية
- تاريخ الحصول علي الدرجة : 1988 م

2- درجة الماجستير: ماجستير في طب وجراحة الفم والأسنان فرع طب أسنان الأطفال

- إسم الكلية: كلية طب الأسنان - جامعة طنطا
- موقع الجامعة: طنطا, (المحافظة): الغربية
- تاريخ الحصول علي الدرجة: 1995 م

3- درجة الدكتوراة: دكتوراه في طب وجراحة الفم والأسنان فرع طب أسنان الأطفال

- إسم الكلية: كلية طب الأسنان - جامعة طنطا
- موقع الجامعة: طنطا, (المحافظة): الغربية
- تاريخ الحصول علي الدرجة: 2001 م

4- دبلوم إدارة المستشفيات : دور يونيو2017

- إسم الكلية: كلية التجارة - جامعة كفر الشيخ
- موقع الجامعة: كفر الشيخ, (المحافظة): كفر الشيخ
- تاريخ الحصول علي الدرجة: 2017 م
- التقدير: ممتاز

التدرج الوظيفي :-

1-التدرج العلمي

1- معيد بقسم طب أسنان الأطفال - كلية طب الأسنان - جامعة طنطا بالقرار رقم (1309) بتاريخ 1989/11/12م إعتبارا من 1989/11/12م .

2- مدرس مساعد بقسم طب أسنان الأطفال- كلية طب الأسنان - جامعة طنطا بالقرار رقم (284) بتاريخ 1995/08/29م إعتبارا من 1995/08/29م

3- مدرس بقسم طب أسنان الأطفال- كلية طب الأسنان - جامعة طنطا بالقرار رقم (261) بتاريخ 2001/03/10م إعتبارا من 2001/02/21م تاريخ موافقة مجلس الجامعة علي التعيين.

4- أستاذ مساعد بقسم طب أسنان الأطفال- كلية طب الأسنان - جامعة طنطا بالقرار رقم (1851) بتاريخ 2013/11/27م إعتبارا من 2013/11/24م تاريخ موافقة مجلس الجامعة.

5- أستاذ بقسم طب أسنان الأطفال - كلية طب الأسنان - جامعة كفر الشيخ بالقرار رقم (11) بتاريخ 2020/1/8 إعتبارا من 2019/12/31 تاريخ موافقة مجلس الجامعه.

6- نقل أستاذ مساعد بقسم طب أسنان الأطفال - كلية طب الأسنان - جامعة كفرالشيخ بالقرار رقم (7865) بتاريخ 2015/09/16م إعتبارا من 2015/09/13م تاريخ إستلامه العمل بالجامعة.

2-التدرج الاداري

1- تكليف للقيام بأعباء ومهام وكيل الكلية لشئون التعليم والطلاب للعام الأكاديمي 2016/2015م لحين وجود أستاذ بالكلية بالقرار رقم (7871) بتاريخ 2015/09/19م إعتبارا من 2015/09/19م .

2- تجديد تكليف للقيام بأعباء ومهام وكيل الكلية لشئون التعليم والطلاب للعام الأكاديمي 2017/2016م لحين وجود أستاذ بالكلية بالقرار رقم (711) بتاريخ 2016/07/28م إعتبارا من 2016/07/28م.

3- تجديد تكليف للقيام بأعباء ومهام وكيل الكلية لشئون التعليم والطلاب للعام الأكاديمي 2018/2017م لحين وجود أستاذ بالكلية بالقرار رقم (873) بتاريخ 2017/8/20م إعتبارا من 2017/8/20م.

4- تجديد تكليف للقيام بأعباء ومهام وكيل الكلية لشئون التعليم والطلاب للعام الأكاديمي 2019/2018م لحين وجود أستاذ بالكلية بالقرار رقم (740) بتاريخ 2018/8/7م .

5- تجديد تكليف للقيام بأعباء ومهام وكيل الكلية لشئون التعليم والطلاب للعام الأكاديمي 2020/2019م لحين وجود أستاذ بالكلية بالقرار رقم (1332) بتاريخ 2019/7/2م إعتبارا من 2019/8/1م.

بيان بالنشاط العلمي والأكاديمي

1- عضو محكم في لجنة الترقيات لفحص الانتاج العلمي لشغل وظائف الاساتذة والاساتذة المساعدين بالمجلس الأعلي للجامعات (لجنةتقويم الاسنان وطب اسنان الاطفال) اللجنة الثالثة عشر 2019-2022

2- الاشراف على العديد من رسائل الماجستير في جامعة طنطا وكفر الشيخ .

3- عضو حكم ومناقشة للعديد من رسائل الماجستير بالجامعات المصرية المختلفة.

4- حضور وإلقاء أبحاث بمؤتمرات دولية.

5- حضور وإلقاء أبحاث بمؤتمرات محلية.

6- رئيس جلسة لبعض المحاضرات الملقاه في المؤتمرات الدولية والمحلية.

7- إلقاء محاضرات في العديد من اللقاءات العلمية لهيئة التامين الصحي وبرامج التدريب لوزارة الصحة المصرية وأطباء الامتياز بكليات طب الأسنان وكذلك النقابات الفرعية لأطباء الأسنان بمختلف محافظات الجمهورية.

8- حضور دورات تدريبية.

9- عضو في لجان الإمتحانات لطلبة البكالوريوس في قسم طب أسنان الأطفال وصحة الفم وطب الأسنان الوقائي للعديد من كليات طب الاسنان بالجامعات المصرية.

10- عضو لجان الإمتحانات لطلبة الدراسات العليا المقيدين لدرجة الدبلومة والماجستير والدكتوراه في طب اسنان الاطفال وصحة الفم بالجامعات المصرية.

عنوان رسالة الماجستير

Effect of short term penicillin derivatives therapy on salivary level of streptococcus mutans in relation to dental caries in children suffering from acute infections

تأثير إستخدام مشتقات البنسلين لفترة قصيرة علي المكورات السبحية التحولية وعلاقتها بالتسوس في لعاب الأطفال المصابين بالتهابات حادة

المشرفون

ا.د/ نجاة محمود وجيه

(أستاذ طب أسنان الأطفال والصحة العامة - بكلية طب الأسنان - جامعة طنطا) .

ا.د/وسيلة مرسي محمد

(أستاذ الميكروبيولوجي - بكلية الطب - جامعة طنطا) .

د/ عزة محمود تاج الدين

(مدرس طب أسنان الأطفال - بكلية طب الأسنان - جامعة طنطا) .

1995

عنوان رسالة الدكتوراه

Clinical and laboratory evolution of hybrid ionomers and composite resin in reinforcement of weakened root canals of central incisors in children

التقييم الاكلينيكي والمعملي للأيونومر المهدرج والكومبوزيت الراتنجي المستخدم في تقوية قنوات الجذور الضعيفة للقواطع المركزية في الأطفال

المشرفون

ا.د / فاطمة عبد المنعم الهنداوي

(أستاذ بقسم طب أسنان الأطفال - بكلية طب الأسنان - جامعة طنطا) .

د / حاتم عبد الحميد الحدينى

(مدرس بقسم العلاج التحفظي بكلية طب الأسنان - جامعة طنطا) .

د / أسامة محمد عبد الكريم

(مدرس بقسم خواص المواد بكلية طب الأسنان - جامعة طنطا) .

2001

عضوية لجان حكم ومناقشة

1- Dental age assessment among a group of children in Tanta city

تقدير العمر السني من خلال مجموعة من الاطفال في مدينة طنطا

By

Abdlrahman Mezar Azzawi
Faculty of Dentistry
Tanta University
2014

2- A study on the eruption sequence of primary and permanent teeth in a group of children in Giza Governorate

دراسة عن تسلسل بزوغ الاسنان اللبنية والدائمة لدي مجموعة من الاطفال بمحافظة الجيزه

By

Rehab Helmy Mohamed
Faculty of Dentistry
Cairo University
2015

3- Assessment of oral health status and dental age in children with from B-thalassemia major

تقييم حالة الصحة الفموية والعمر السني للاطفال المصابين بانيميا البحر الابيض المتوسط الكبري

By

Mohamed Gamal El Kashlan
Faculty of Dentistry
Tanta University
2017

4- Assessment of Biodentine as an indirect pulp capping material in young permanent molars

تقييم البيودنتين لتغطية اللب الغير مباشرة في الاضراس الدائمة الحديثه

By

Amira Fathy Soliman
Faculty of Dentistry
Tanta University
2018

5- Evaluation of ethetics and marginal adaptation of composite restoration for fractured permanent incisors

التقييم الجمالي والتكيف الحافي للكمبوزيت الراتنجي المستخدم في ترميم القواطع الدائمه المكسوره

By

Mai Mohamed Ibrahim
Faculty of Dentistry
Mansura University
2018

6- Evaluation of children's anexiety using different behavior management technique

تقييم القلق عند الاطفال باستخدام أساليب ادارة السلوك المختلفة

By

Diana Mohamed Saad Amer
Faculty of Dentistry
Mansura University
2019

7- Applicability of Boston University Approach for predecting permanent teeth size in size in a Sample of Children

تطبيق طريقة جامعة بوسطن للتنبأ بحجم الاسنان الدائمه في عينة من الاطفال

By

Ahmed Abou Bakr Ali
Faculty of Dentistry
Tanta University
2020

8- Evaluation of Antibacterial and Mechanical Properties of Three Different Pit and Fissure Sealant Materials

تقييم خاصية التضاد البكتيري والخواص الميكانيكية لثلاثة انواع مختلفة من ساد الشقوق

By

Hadeer Mohamed Abdelwahab Ayeldein
Faculty of Dentistry
Tanta University
2020

9- Oal Health, Antioxidant and Oxidative Stress Evaluation among Autistic Children

تقييم صحة الفم , مضادات الاكسده وتاكسد التوتر العصبي بين الاطفال المصابين بطيف مرض التوحد

By

Yasmine Fouad Saif El Nasr Zidan
Faculty of Dentistry
Tanta University
2021

10- Assessmet and Managemen of Gagging Problem among Children Using Topical Anesthesia and Intelectual Distraction

تقييم وعلاج مشكلة التقيئ لدي الاطفال باستخدام المخدر الموضعي والتشتت الذهني

By

Nada Hamed Mahmoud Ahmed
Faculty of Dentistry
Mansoura University
2021

الاشراف علي الرسائل العلمية

1- An evaluation of two active lingual arches used for resolving moderate lower anterior crowding in mixed dentition

تقييم إثنين من القوس اللساني النشيط المستخدمة لاصلاح إعوجاج الأسنان السفلية الأمامية في مرحلة التسنين المختلط

By

Ahmed Ezzat
Faculty of Dentistry
Tanta University
2005

2- Clinical and radiographical evaluation of Beta Tricalcium phosphate and Mineral Trioxide Aggregate in primary molar pulpotomy

تقييم اكلينيكي وبالاشعة لمادة "التراي كالسيوم فوسفات والمينيرال تراي اوكسيد اجريجيت" في علاج العصب الجزئي للضروس اللبنية

By

Mohamed Ahmed Ragheb Kotkat
Faculty of Dentistry
Tanta University
2002

3- Clinical and laboratory evaluation of resin-based and glass ionomer fissure sealants in first permanent molars of children

تقييم إكلينيكي ومعملي لساد الشقوق الراتنجي وأسمنت الأيونومر الزجاجي في أضراس الأطفال الدايمة

By

Shymaa Mohamed Hedwa
Faculty of Dentistry
Tanta University
2014

4- Comparative Study of the Clinical and Radiographic Effects of Pulpotec and Mineral Trioxide Aggregate on the Pulp of the Primary Molars

دراسة مقارنه للتأثير السريري والشعاعي لكل من البلبوتيك ومينيرال تراي اكسيد اجريجات علي لب الأضراس اللبنيه

By

Ola Badawy Zewil
Faculty of Dentistry
Tanta University
2018

5- Fabrication and Evaluation of a Novel Nano modified Resin Cement in Tooth Fragment Reattachment of Uncomplicated Coronal fracture of Permanent Incisors: In Vitro Study

تصنيع وتقييم أسمنت راتنجي حديث بالنانو في إعادة شظية الأسنان في الكسر التاجي غير المعقد للقواطع الدائمة: دراسة في المختبر

By

Baraa M. El-Kemary
Faculty of Dentistry
Kafrelsheikh University
2018

إلقاء أبحاث بالمؤتمرات الدولية والمحلية

Attended as a speaker in all the following:

1-Tanta International Dental Conference (TIDC 2017), Tanta University.
Egypt-Tanta (13-15 December)

Title : a- Over view on compromised permanent incisors management
: b- Platelet-rich Fibrin as a Possible Autogenous Transport Medium for Avulsed Teeth: An in Vitro Study

2-The 18 International Dental Congress (EDA) 2017.
Cairo- intercontinental city star. Egypt (22-24 November)

Title: Rehabilitation of compromised permanent incisors with anatomically adjustable fiber post

3-The 18 International Dental Congress (EDA) 2017.
Cairo- intercontinental city star. Egypt (22-24 November)

Title: Laboratory and Clinical Evaluation of Uncomplicated Fragment Reattachment Using Pinholes

4-The 3rd Kafr El Sheikh Dental Conference 2017.
Egypt-Kafr El Sheikh (26-27 October)

Title: Management of intrusive luxation with immediate surgical repositioning

5-CED-IADR/NOF World Dental Congress 2017.
Austria-Vienna (21-23 September)

Title: Antibacterial and Mechanical Assays of Resin Modified Glass Ionomer Containing Propolis is Extract

6-FDI world dental congress 2017.
Madrid-Spain (28 August-1 September

Title: Laboratory and clinical evaluation of uncomplicated fragment reattachment using pin holes

7-FDI world dental congress 2017.
Madrid-Spain (28 August-1 September)

Title: Rehabilitation of compromised permanent incisors with anatomically adjustable fiber post

8-The 1st Egyptian Dental Syndicate International Congress (EDSIC) 2016
Egypt (31 August-2 September)

Title: Propolis: An Ancient Egyptian Agent in Pediatric Dentistry

9-The 1st Menofia Dental Syndicate Conference 2016.
Egypt-Menofia (31 August-2 January)

Title: Propolis: An Ancient Egyptian Agent in Pediatric Dentistry

10-The 2nd Egyptian Dental Syndicate International Congress (EDSIC) 2015
Egypt (2-4 September)

Title: Biologic reinforcement of compromised permanent incisors in children

11-The 4th International Dental Congress 2015, Tanta Dental Congress
Egypt-Tanta (April 2015)

Title: Human Natural Restoration in Young Permanent Incisors. A New Technique

12-The 1st International Dental Congress 2014, Faculty of Dentistry, in Shams University, In collaboration with Misr International University
Egypt (9-11 October)

Title: Human Natural Restoration in Young Permanent Incisors. A New Technique

13-The 2nd Annual Conference of Kafr El Sheikh Dental Administration in Collaboration with Dental Department of General Hospital 2014
Egypt-Kafr El Sheikh (3-4 April)

Title: Human Natural Restoration in Young Permanent Incisors

14-The 16th international Dental Congress 2013
Egypt (5-8 November)

Title: Evaluation of accessory fiber posts with self-adhesive resin-modified glass ionomer in reinforcement of structurally compromised upper permanent incisors in children

15- The 1st International Conference of Egyptian Society for Pediatric Dentistry and Children with Special Needs (Rehab., Relief & Rejoy)
4-6 March 2009 - Cairo – Egypt

Title: Biologic reinforcement of compromised permanent incisors in children

International Oral Presentations (3) & Posters (3)

1-Antibacterial and Mechanical Assays of Resin Modified Glass Ionomer Containing Propolis Extract

Talat M. Beltagy, Marwa Ezzat Abd-Elmonsef

Oral Presentation*: *CED-IADR/NOF World Dental Congress 2017. Austria - Vienna (21-23 September

Egyptian Dental Journal 2017; 64(1): 1-13.

2-Rehabilitation of Compromised Permanent Incisors with Anatomically Adjustable Fiber Post

Talat M. Beltagy

Oral Presentation*: *FDI world dental congress 2017. Madrid-Spain (28 August-1 September).

Tanta Dental Journal 2018; 15(1): 52-59.

3-Laboratory and Clinical Evaluation of Uncomplicated Fragment Reattachment Using Pinholes

Talat M. Beltagy

Oral Presentation*: *FDI world dental congress 2017. Madrid-Spain (28 August-1 September).

Tanta Dental Journal 2018; 15(2): 1-10 .

4-Biologic reinforcement of compromised permanent incisors in children

Talat M. Beltagy

Poster*: *5th American Dental Congress October 05-07, 2015 Philadelphia, USA

Tanta Dental Journal 2016; 13(3):147-156.

5-Evaluation of accessory fiber posts with self-adhesive resin-modified glass ionomer in reinforcement of structurally compromised upper permanent incisors in children

Talat M. Beltagy

Poster*: *5th American Dental Congress October 05-07, 2015 Philadelphia, USA

6-Laboratory and clinical evaluation of uncomplicated fragment re-attachment using pinholes

Talat M. Beltagy

Poster*: *23rd Global

Dentists and Pediatric Dentistry Annual Meeting,
July 17-18, 2017 Munich, Germany

المشاركة بالحضور قي المؤتمرات الدولية والمحلية

Certificate of attendance

1-16 th Gharbia Dental Syndicate Conference, (White & Pink)
Gharbia, Tanta Club (19-20 October2017)

2- 15 th Gharbia Dental Syndicate Congress (GDSC) 2016
Gharbia, Arafa Hotel, Tanta (27-28 October)

3-The Annual Conference of Gharbia Dental Syndicate
(Future Prospective in Dentistry)
El Yasmina Plaza, Hotel, Tanta, 22 th-23th November 2012

4-18 th Alexandria International Dental Congress (AIDC 2012)
Alexandria University, 7-11 November.

5- The Second International Conference of Egyptian Society for Pediatric Dentistry and Children with Special Needs
14-15 March 2012 - Cairo - Egypt

6- The 15 th International Dental Congress
Intercontinental City Stars Hotel- Cairo- Egypt. 26th-28th October 2011

7- The Regional Conference of Middle Delta Area
(Towards Excellence in Dental Practice)
Arafa Hotel, Tanta, 9-10 December 2010

8- Kafr Elsheikh First Dental Conference
Information and Development Center, 29-30 July 2010

9- The 2nd International Dental Congress
Intercontinental City Stars Hotel- Cairo- Egypt. 24th-26th March 2010

10- The Delta Regional Conference of Dentistry
Experts Meeting, Arafa Hotel, Tanta, 17-18 December 2009

11- The 14 th International Dental Congress
Intercontinental City Stars Hotel- Cairo- Egypt. 11-13 November 2009

12- The 1st International Conference of Egyptian Society for Pediatric Dentistry and Children with Special Needs

Triumph Hotel, 4-6 March 2009, Cairo - Egypt

13- The 2 nd International Conference for Enhancing Scientific Research: Innovation and development

Tanta University, 4-5 March 2009

14- The Third Delta Regional Conference

Experts Meeting, Arafa Hotel, Tanta, 13-14 November 2008

15- The 1st International Conference of Egyptian Society for Pediatric Dentistry and Children with Special Needs (Rehab., Relief & Rejoy)

4-6 March 2009 - Cairo - Egypt

16- The 13 th International Dental Congress

Cairo Mrriot Hotel- Cairo- Egypt. 20-23 November 2007

17- 12 th International Dental Congress

Cairo Mrriot Hotel, Egypt. 29 Nov.- 2 Dec. 2005

18- The First Arab Dental Forum

Tanta University, 20-22 November 2004

19- Gharbia 1st Annual Scientific Syndicate in Conjunction with the Egyptian Dental Syndicate and the Egyptian Association of Oral and Maxillofacial Surgery

(Current Dental Update), Gharbia Syndicate 23-24 October 2003

20- The 2nd International Congress, 3rd Scientific meeting for Pedodontics

(The Joint), Tanta University. 31 October 2001

21- Implant Training Program (15 Credit Hours)

Tanta University. 26 December 1995

بيان بالإنتاج العلمي من الابحاث العلمية

1-Effect of Multiple Stainless Steel Crowns on Salivary pH, Nickel, and Chromium Levels

تأثيرتعدد تيجان الفولاذ المقاومه للصدأ على مستوي الدالة الحامضية والنيكل والكروم في اللعاب

Talat M. Beltagy
Egyptian Dental Journal 2020; 66(1): 1-16.

2-Clinical, Radiographical and Histopathological Evaluation of Amniotic Membrane Allograft Pulpotomy in Primary teeth

التقييم الإكلينيكي والشعاعي و الهستوباثولوجي لإستخدام الغشاء الأمنيوسي المزروع في علاج البتر الجزئي التاجي للب الأسنان الأولية

Talat M. Beltagy, Sarah Yasser
Egyptian Dental Journal 2019; 65(4): 361-379.

3-Invisible Reinforcement of Uncomplicated Coronal Fracture Using Two Different Fiber-reinforced Composites: In Vitro and In Vivo Study

التدعيم الغير مرئي للكسر التاجي الغير معقد بإستخدام مركبين مختلفين من الألياف المقواة بالكمبوزيت: دراسة معملية وإكلينيكية

Talat M. Beltagy
Tanta Dental Journal 2019; 16(4): 201-215.

4-The Most Common 5 Pediatric Oral Lesions in Middle Nile Delta, Egypt

أكثرخمسة أمراض فموية شيوعا لدي الأطفال بوسط دلتا نيل مصر

Talat M. Beltagy, Enas A. El-Gendy, Emad F. Essa and Ibrahim A.Kabbash
Egyptian Dental Journal 2019; 65(2), 169-181

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1- دورات تنمية قدرات أعضاء هيئة التدريس وهى كالآتي:

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1	أخلاقيات المهنة	2018-4-22م	2018-4-23م
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3	إدارة الفريق البحثي	2018-5-6م	2018-5-7م
4	التخطيط الإستراتيجي	2017-7-26م	2017-7-27م
5	الجوانب المالية والقانونية في الجامعات	2017-7-30م	2017-8-1م
6	النشر العلمي الدولي	2017-8-6م	2017-8-8م
7	نظام الساعات المعتمدة	2009-5-26م	2009-5-28م
8	مهارات الإتصال في انماط التعليم المختلفة	2009-6-9م	2009-6-11م
9	الجوانب القانونية والمالية في الاعمال الجامعية	2009-06-16م	2009-06-18م
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13	اتخاذ القرارات وحل المشكلات	2005-12-6م	2005-12-8م

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Basic technique of stem cell isolation and tissue culture 2016

ملخص الأبحاث العلمية المنشوره

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Micro-marsupialization as a conservative therapeutic approach for management of pediatric oral mucoceles

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Background
Alteration of minor salivary glands due to a mucous accumulation is known as mucocele. It is considered to be a common oral mucosa lesion in pediatric and adolescents. The invasive conventional surgical technique, including surgical excision of the mucocele with the affected minor salivary gland, is not preferred especially in large lesion and in pediatric patients.

Objective
This research aims to study the efficacy of micro-marsupialization as a new conservative technique for management of oral mucoceles in pediatric patients.

Patients and methods
A prospective study was carried out using the clinical records of patients under 12 years old. The patient's age was ranged between 6 and 12 years old with a mean of 9.83 years. Twelve patients were included; they were suffering from mucocele and were treated using conservative micro-marsupialization as a solo treatment via draining the mucus out of the mucoceles to reduce its size and allowing subsequent healing. All children were recalled for clinical evaluation after 1 week, 1, and 3 months.

Results
Out of the 12 children, seven (58.3%) children were complaining of lower lip mucoceles with 100% success, while the other five (41.7%) children were complaining of oral ranula, the micro-marsupialization technique showed 80% of successful results plus one recurrent case after 1 month of the technique that was treated by conventional marsupialization with packing.

Conclusion
Micro-marsupialization has proved to be a simple technique, the best choice management for pediatric mucoceles. It is rapid to perform, noninvasive, painless, requires only surface anesthesia, effective, low recurrence, well-tolerated by children, and can be easily performed by dental general practitioner in daycare outpatient departments safely.

Keywords:
micro-marsuiaplization, minor salivary gland, pediatric mucocele, ranula

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Introduction

Mucocele is a mucous accumulation resulting from an alteration of minor salivary glands. This accumulation involves mucin secretion causing limited swelling [1]. The two crucial etiological factors in mucoceles are trauma and obstruction of salivary gland ducts [2]. The rank of mucoceles among the most common oral lesions is 17th with the incidence of ~2.5 lesions per 1000 individuals and it represent the second most popular benign soft tissue lesion that affecting the oral cavity [3].

Mucoceles often arise within a few days after minor trauma. It can persist unchanged for months unless treated [4]. Mucocele appears as an asymptomatic pink or bluish nodule but it causes discomfort and creates trouble especially in children, the size may vary from 1 mm to several centimeters [5].

Although the lower labial mucosa is the most affected site, it may affect the cheek, tongue, palate, and floor of the mouth and there is no sex predilection [6].

Mucocele is derived from Latin words 'muco' and 'coele,' meaning mucus and cavity, respectively. It can appear as either one of two types: the extravasation type and the retention type. Extravasation results from a broken salivary glands duct and the consequent accumulation into the soft tissues around this minor salivary gland. Retention appears due to blockage of the minor salivary gland ducts with retention of glandular secretion [7]. A mucocele, in the floor of the mouth in relation to the sublingual gland, is known as ranula. Its name is derived from the Latin word 'Rana' which means 'Frog'. The swelling looks like a frog's translucent underbelly or air sacs [8].

Different techniques have been described for the management of mucoceles[4] including conventional

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EFFECT OF MULTIPLE STAINLESS STEEL CROWNS ON SALIVARY PH, NICKEL, AND CHROMIUM LEVELS

Talat Mohamed Beltagy*

ABSTRACT

Background: The use of stainless steel crowns (SSCs) in pediatric dentistry is widely used. Recently, there has been an increasing ecological and global public health concern associated with environmental contamination by metallic alloys. **Aim of the study:** To determine the in-vitro and in-vivo effect of multiple stainless steel crowns on the salivary pH, nickel and chromium levels at different periods. **Materials and methods:** This study consisted of: **I-In-vitro study:** A total of 200 standard sizes of SSCs were divided into 4 groups (10 samples/each). Each sample/group contained 2, 4, 6, and 8 SSCs, respectively. All SSCs were trimmed 1mm circumferentially, smoothed, re-contoured, fitted, and cemented on standard crowns of plastic teeth models. Each group was placed in a closed container containing artificial saliva with a standard pH. **II-In-vivo study:** A total of 40 patients indicated for SSC restorations were selected, aged 5-9 years. Similar to in-vitro, they were allocated into 4 groups according to the numbers of SSCs restorations used. 5ml of unstimulated saliva was taken for pH, nickel, and chromium analysis at 5-intervals: baseline, and 1day, 1week, 2weeks, 1month, and 2-months post-cementation. **Data analysis:** The mean and standard deviations, one way ANOVA, and the Person correlation coefficient were used. The level of significance was adopted at $p \leq 0.05$. **Results: In both studies:** The more the increase in the number of SSCs, the more the increase in acidity and release of ions. **As regards pH value**; within the groups at 5 intervals, there was only a significant difference in groups containing 8 SSCs and 6 SSCs, and between the intervals and the baseline ($p \leq 0.05$). The group that has 8 SSCs recorded the lowest pH value. Among groups: in-vitro: all groups showed a significant difference during 3-time intervals ($p \leq 0.05$) except at 2-months; the difference was not significant ($p > 0.05$), while in-vivo, the difference was not significant ($p > 0.05$). **As regards the released ions:** Within groups, both studies showed a significant difference among all intervals, and between the intervals and the baseline ($p \leq 0.05$). Among groups: In-vitro, all groups showed significant differences during the intervals ($p \leq 0.05$), while the only period showing no significant difference was at 2 months in the chromium group ($p > 0.05$). The group that has 8 SSCs recorded the highest level and the difference was significant ($p \leq 0.05$). The peak level of the released ions and reduced pH value was at 1day and 1week for in-vitro and in-vivo study, respectively. **Conclusion:** The released nickel and chromium ions were directly proportional to the number of stainless steel crowns whereas the pH value was inversely proportional. The maximum level recorded was 1day and 1-week post-cementation for in-vitro and in-vivo study, respectively. The peak released of ions was much lower than the toxic level or the level of dietary intake.

KEYWORDS: biodegradation, nickel-chromium levels, pH, stainless steel crowns, children

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THE MOST COMMON 5 PEDIATRIC ORAL LESIONS IN MIDDLE NILE DELTA, EGYPT

Talat M. Beltagy*, Enas A. El-Gendy**, Emad F. Essa*** *and* Ibrahim A. Kabbash****

ABSTRACT

Background: The prevalence studies on common pediatric oral lesions (POLs) are still rare compared with those on dental caries and periodontal diseases. POLs vary among different geographic regions, age, racial and lifestyle of each population. **The purpose of this study** was to determine the most common 5 POLs referred to 5 different dental and medical branches in Middle Nile Delta, Egypt.

Materials and methods: A qualitative study design was used depending on expert opinions on oral lesions in children (aged 0-14 years). A total of 1164 dental and medical staff members, dentists and physicians at the hospitals of Universities and Ministry of Health, and Specialized Medical Centers & hospitals in the Middle Nile Delta region were included. The target population of the study was experts in 5 branches: Pedodontics, Oral Medicine and Periodontology, Oral and Maxillofacial Surgery, Pediatrics, and Dermatology and Venereology. Data were collected using a checklist including the common diseases within the scope of the study and each expert was asked to give percentages for children seen with each disease entity in his/her branch. **Data analysis:** Data were statistically analyzed using Statistical Package for the Social Sciences version 19. For each disease, the number and percentage were calculated and differences between observation recorded by health care workers in University and Ministry of Health were tested by chi-square test. P values < 0.05 were considered significant.

Results: The most common 5 lesions in Middle Nile Delta region were herpes infection (70.1%), candidiasis (69.2%), aphthous ulcer (67.3%), geographic tongue (56.1%), and acute dental abscess (49.7%). According to each branch; in Pedodontics; acute dental abscess (95.5%), pulp polyp (94.5%), parulis (88.6%), herpes infection (82.7%), and acute pericoronitis (82.3%) were recorded. In Oral Medicine and Periodontology; herpes infection (95.5%) was on the top, followed by physiologic pigmentation (83.5%), candidiasis (76.8%), aphthous ulcer (75.0%), and geographic tongue (70.5%), while in Oral and Maxillofacial Surgery; acute dental abscess (68.1%), acute pericoronitis (59.2%), odontoma (55.0%), eruption cyst (49.2%), and hemangioma (46.7%) were recorded. In the Pediatric branch; the top lesion was candidiasis (96.2%), followed

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THE EFFECTS OF AN ANTI-INFLAMMATORY DIET ON GINGIVAL HEALTH IN CHILDREN (RANDOMIZED CONTROLLED TRIAL)

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ABSTRACT

Background: Several studies observed that only under western diet condition, there was a link between improper plaque control measures and gingival inflammation. Therefore, the aim of this clinical trial was to study the effects of an anti-inflammatory diet on the clinical and serological parameters in children with gingivitis.

Subjects and methods: Forty children were randomly allocated to test and a control group. The participants within a test group were instructed to change their usual diet to anti-inflammatory diet that is rich in vitamin C, antioxidants, omega-3 fatty acids, plant nitrates, vitamin D, fibers and contain a low amount of processed carbohydrates for 4 weeks. While patients within the control group followed their usual dietary habit until the termination of the study. Gingival index and Plaque index were recorded at baseline and after 4 weeks for all children in both groups. Salivary samples were taken at baseline and after 4weeks for quantification assessment of serological parameters for all participants.

Results: While, all patients in both groups showed an increase in the mean values of plaque index. Children within the test group showed a significant decrease in the mean values of Interleukin-6 (IL-6), gingival index, and Tumor Necrosis Factor-α (TNF-α) from baseline to the end. This reduction was statistically significant when compared to a control group.

Conclusion: Anti-inflammatory diet can significantly reduce serological parameters and gingival inflammation in children.

Key words: Anti-inflammatory diet; Interleukin-6; Gingivitis; Tumor Necrosis Factor-α

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Invisible Reinforcement of Uncomplicated Coronal Fracture Using Two Different Fiber-reinforced Composites: In Vitro and In Vivo Study

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Abstract:

Purpose: To evaluate in-vitro and in-vivo the fiber-reinforced composite (FRC) in the restoration of uncomplicated coronal fracture of upper permanent central incisors.

Materials and Methods: *I- in-vitro:* standardized one-third coronal sections were prepared on 30 extracted human maxillary central incisors with close similarity. The specimens were embedded perpendicular to standard molds of self-curing acrylic resins and randomly assigned into 3 groups (n=10/each). Group I: restored with glass FRCs and particulate filler composite (PFC), group II: restored with polyethylene FRCs and PFC, and group III (control): restored with PFC. In the groups I and II, a shallow palatal preparation was prepared. The fracture resistance was determined by a universal testing machine. Failure modes were optically magnified and analyzed. *II- in-vivo:* a clinical prospective study was performed on 27 patients, aged 9-18 years, presented with Ellis class II fractures of maxillary central incisors. The teeth were randomly divided into 3 groups (n=10 teeth/ each) as in the in-vitro study. All patients were followed-up clinically and radiographically at 3, 6, 9 and 12-month.

Results: *In-vitro:* the glass FRCs recorded the high fracture strength values, followed by polyethylene FRCs, and PFC and the difference was significant among them ($P \leq 0.05$). Mode of failures showed no significant difference among them ($P \leq 0.05$). However, *in-vivo* results showed 100% clinical success for FRCs groups compared with 80% for PFC, but the difference was not significant ($P \geq 0.05$). The radiographic findings showed 100% success.

Conclusion: Only in the in-vitro study, the invisible substructure of glass FRCs followed by polyethylene FRCs seems to be significantly effective in restoration of Ellis class-II fractures of permanent incisors and promising to improve load-bearing capacity.

Keywords: Coronal fracture, Fibre-reinforced composite, Fracture resistance uncomplicated.

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1. Introduction:

Traumatic dental injury (TDI) in children is a challenge for professionals [1], its prevalence in children has increased during the last few decades [2]. The TDI may compromise functional, esthetic, social and psychological impacts [3]. Thereby, immediate management of TDIs is highly recommended.

Uncomplicated coronal fracture is the most common TDIs caused by certain trauma events such as sports, violence, falls, and traffic accidents [4]. The permanent teeth affected up to 51% [5,6]. The maxillary incisors are the most affected ones, forming 96% of all coronal fractures [7].

Various techniques have been proposed for restoring the incisal edge fracture such as fragment reattachment [8], direct composite restorations [9], pins retained resin [10], indirect composite or ceramic inlays, and crowns [11]. The strength of anterior restoration should be high to withstand the heavy mastication or the impact forces during retrauma [12]. To gain more restoration stability, little or various additional tooth preparations were used such as placement of circumferential bevel, internal groove, chamfer, shoulder with or without bevel [13,14], and superficial over-contour. However, the substantial sacrifice of tooth structure and the compromised esthetic outcomes of several techniques may limit their uses in anterior restoration [15].

Different bonding and adhesive systems were developed to improve the restoration's strength, but their results in coronal restorations were questionable [11]. To enhance their physicomechanical properties, different types of fibers were incorporated into the resin matrix such as carbon, glass, victran, kevlar, and polyethylene fibers [16]. Currently, fiber-reinforced composites (FRCs) are commonly

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CLINICAL, RADIOGRAPHICAL AND ANTIBACTERIAL EVALUATION OF 3MIX AS A ROOT CANAL FILLING MATERIAL FOR PRIMARY TEETH

Nagwa A Ghoname*; Talat M Beltagy** *and* Ibtesam K Afifi***

ABSTRACT

Elimination of the bacteria from the root canals is the key goal in endodontic treatment, the complexity of the pulp canal system in primary teeth presents a discerning problem for chemo-mechanical preparation. Therefore, the application of root canal filling materials with properties such as antibacterial potential and biocompatibility is important in order to achieve successful outcomes. The present study was conducted to evaluate the clinical, radiographic and antibacterial efficiency of 3Mix as a root canal filling material for primary teeth compared to zinc oxide-eugenol. For clinical study, thirty mandibular primary molars were utilized in fifteen children of both genders aged from four to seven years old attending to Out-patient Clinic of Pedodontic Department, Faculty of Dentistry, Tanta University. The teeth that met the inclusion criteria were treated with the same conventional root canal technique. Clinical and radiographic evaluation were done for nine months. The antibacterial effect of 3Mix and zinc oxide-eugenol was estimated against, *Escherichia coli*, *Staphylococcus aureus* and *Streptococcus mutans* using agar diffusion test. The overall clinical success rate was 93.33% in 3Mix group compared to 86.66% in zinc oxide-eugenol group, while the radiographic success rate was 86.66% and 73.33% in both groups respectively. No significant difference was found between the two groups. The antibacterial results showed that, 3Mix presented the largest inhibitory zones against *Escherichia coli*, *Staphylococcus aureus* and *Streptococcus mutans* compared to zinc oxide-eugenol with statistically significant difference in the mean inhibition zones between the two tested materials ($P < 0.001$). Based on the clinical, radiographic and antibacterial results, 3Mix has shown promising results in fulfilling its role as a root canal treatment agent in primary teeth.

INTRODUCTION

Root canal treatment of primary teeth may be an alternative choice to extraction while attempting to prevent premature loss of the primary teeth; an intact tooth successfully disinfected, remain free from the disease and restored clinically is a superior space maintainer than an appliance.[1]

The success of endodontic treatment relies directly on the accurate accomplishment of all operative procedures, strict compliance with the

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HISTOPATHOLOGICAL PULP RESPONSE TO PLATELET-RICH PLASMA PULPOTOMY IN PRIMARY TEETH

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ABSTRACT

Background: To overcome the disadvantages of various synthetic-based biomaterials used in pulp therapy, the researchers are directed towards innovation of novel materials that are biologically compatible. Platelet-rich plasma (PRP) is considered one of the novel biologically-based autologous substitutes.

Purpose: To evaluate histopathologically the pulp response to the platelet-rich plasma as a pulpotomy medicament in primary teeth.

Materials and methods: A total of 30 healthy lower first primary molars and canines that indicated for serial extraction were selected for this experiment. PRP and formocresol pulpotomies were performed (12 teeth/each group), where the other 6 teeth were used as a control. Four teeth from each experimental group and one control were extracted at post-treatment intervals; 14 days, one and three months. The samples were prepared and the tissues' sections were stained with Hematoxylin & Eosin for histopathological evaluation. Using ordinary light microscope, all sections were histopathologically analyzed blindly in terms of soft tissues organization, degree of inflammatory reaction, hyperemic changes, pulp necrosis and dentin bridge formation.

Statistical analysis: All data were analyzed with the Mann-Whitney U-test and the probability level of significance was accepted at $p < 0.05$.

Results: The overall histopathological results of pulp response to PRP were statistically significant in terms of soft tissue organization, degrees of inflammation, hyperemia, and pulp necrosis than formocresol ($p < 0.05$).

Conclusion: Histopathologically, it was concluded that PRP had induced significantly a successful healing biologic response than synthetic formacresol; serving as a potent autogenous pulpotomy medicament alternative to formocresol.

KEYWORDS: Platelet-rich Plasma, Histopathological response, Formocresol pulpotomy, Primary dentition.

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Laboratory and clinical evaluation of uncomplicated fragment reattachment using pinholes

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Purpose
To evaluate laboratory and clinically the uncomplicated fragment reattachment using pinholes.

Materials and Methods
A total of 40 extracted human intact upper permanent central incisors with close similarity were selected and randomly divided into four groups ($n = 10$) according to the technique of reattachment. The incisal third of 30 specimens were sectioned horizontally. Group I: pinholes, group II: internal dentinal groove, group III: simple reattachment, and group IV (control group): intact teeth. Each fragment was reattached to its sectioned tooth using adhesive bond and resin cement. All specimens were tested for fracture strength under standard conditions in an Instron testing machine. The clinical study was performed on 20 patients, aged 8–16 years, presented with uncomplicated fragments of fractured upper central incisors, and divided into two groups (10 patients each). Group I: pinholes and group II: internal dentinal groove. All patients were followed-up clinically and radiographically at 3, 6, 12, and 18 months. Data were analyzed using one-way analysis of variance and post-hoc test with the significant level P less than 0.05.

Results
The laboratory study showed that the control group recorded the high strength value followed by pinholes, internal groove, and simple reattachment and the difference was statistically significant. However, the clinical results showed no significant differences between the two techniques.

Conclusion
It was concluded that the pinholes technique had only a significant effect on fragment reattachment success in the in-vitro study.

Keywords:
coronal tooth fracture, fragment reattachment techniques, tooth fragment

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Introduction

The coronal fracture of the anterior teeth is the most frequent form of traumatic dental injury affecting mainly children and adolescents, especially the youngest (8–11 years), and the upper central incisors are the most commonly affected due to their vulnerable situation in the dental arch [1]. Several factors can influence the management of crown fractures, including the extent of the fracture, fracture pattern and tooth restorability, a patient's age, soft tissue condition, absence/presence of tooth fragment, the condition of reattachment, esthetic expectations, occlusion, economics, and prognosis [2,3].

The coronal fractures are classified according to WHO into uncomplicated crown fractures, such as enamel and dentin fractures and complicated crown fractures that associated with pulp and/or periodontal involvement [1]. The uncomplicated and complicated crown fractures in children's teeth caused by trauma represent ~ 28–44 and 11–15%, respectively [4].

Various treatment options have been developed to restore the uncomplicated crown fractures, such as veneers [5], or jacket crowns; however, such treatments are more destructive and harmful to the pulp [6]. The development of resin composite and bonding systems can provide a more conservative approach [7]. Despite the advanced technology in adhesives and restorative techniques, still, no restorative material can reproduce the natural dental structures, functional demands, and esthetic hue [8]. Therefore, when a fractured fragment is available, it is the first restorative option that should be performed immediately [9,10].

The original fragment reattachment is a vital important technique for restoring coronal fracture. It overcomes the disadvantages of full-coverage or resin restorations [10]. The technique is fast, simple to use, minimally invasive, less time-consuming, and low-cost. It improves the emotional discomforts and incisal function. Likewise,

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PLATELET-RICH PLASMA PULPOTOMY IN PRIMARY MOLARS

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ABSTRACT

Background: In spite of the technological advances in dental restoratives, there is a constant need for the development of a novel biologically-based autologous capping substitute that overcomes the side effects of various synthetic-based biomaterials used for pulpotomies. **Purpose:** To evaluate clinically and radiographically the success of platelet-rich plasma (PRP) medicament in primary molars pulpotomy.

Materials and methods: A randomized controlled clinical trial in which 20 children aged 5-8 years were selected. Each child had at least two lower deeply carious primary molars (1st and/or 2nd) indicated for pulpotomy and randomly divided into two groups; The PRP (study group) in one quadrant and formocresol (control group) in the opposite one. All teeth were treated with the same conventional and standard pulpotomy technique. All patients were followed up clinically and radiographically at 3, 6, 9 and 12 months post-operative. Data were statistically analyzed using Fisher exact test.

Results: The clinical and radiographic success showed no statistically significant difference between both groups ($p > 0.05$). The overall clinical success rate of pulpotomized teeth at the end of recall time was 100 % for PRP and 90% for FC group, whereas the overall radiographic success was 90% for PRP and 85% for FC group.

Conclusion: From the present study, it was concluded that PRP had a successful outcome, a potent therapeutic medicament and had a promising alternative to the presently used pulpotomy medicament.

KEYWORDS: Platelet-rich plasma, Formocresol, Pulpotomy.

INTRODUCTION

The objective of vital pulp therapy in primary teeth is to preserve the pulp vital instead of replacing it with an inert filling and to maintain the integrity and function of the teeth till their time of normal exfoliation[1].

Formocresol (FC) was considered the gold standard for primary teeth pulpotomy[2], but due to some significant side effects as cytotoxicity, potential mutagenicity, immune sensitization, and carcinogenicity, various alternative pharmacotherapeutic medicaments/techniques have

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ANTIBACTERIAL AND MECHANICAL ASSAYS OF RESIN MODIFIED GLASS IONOMER CONTAINING PROPOLIS EXTRACT

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ABSTRACT

The antibacterial efficacy of restorative materials had an important role in preventing the recurrent caries. **The objective** of this study was to evaluate in-vitro the antibacterial and mechanical assays of Vitremer containing ethanolic extract of propolis (EEP). **Materials and methods**: **I-Antibacterial Assay**: The standard strain of Streptococcus *mutans* and Lactobacillus *acidophilus* were used for determination of minimum inhibitory concentration (MIC) of EEP/Vitremer. **II-Mechanical Assay: A-Shear bond strength (SBS)**: sixty half-crowns of non-carious extracted 2nd primary molars were placed at standard moulds containing Teflon disc that had 4mm x 3mm central hole and divided into 4 groups (n=15) according to the different EEP concentrations. Group I: 10%, group II: 25%, group III: 50% EEP-Vitremer mixture, and group IV (control): 0% EEP/ Vitremer and SBS was assessed using Instron machine. **B-Microhardness:** Sixty standard disc-shaped specimens were prepared from mixture 0%, 10%, 25%, and 50%, n=15 and nanoindentation value was recorded. Data were analyzed using one-way ANOVA and post-hoc test. **Results:** Only MIC of 10%, 25%, and 50% mixture showed growth inhibition against *S. mutans*, compared to 25% and 50% against L. *acidophilus*. SBS showed that 0% EEP recorded the highest value followed by10% mixture but the difference was not significant ($p>0.05$), while 25% and 50% reported the lowest values and the differences were significant ($p< 0.05$). 25% and 50% mixtures recorded the highest significant microhardness ($p<0.05$). 0% EEP and 10% mixtures displayed no significant differences between them ($P>0.05$). **Conclusions**: 25% EEP-Vitremer mixture was the most suitable concentration as it exhibits positive significant antibacterial and mechanical assays.

KEYWORDS: Propolis extract, fluoride-releasing restoratives, inhibition of recurrent caries, antibacterial and mechanical assays.

INTRODUCTION

One of the main contributing factors responsible for the failure of restoration is the recurrent caries. In deep caries, it is sometimes difficult to remove all carious dentin to avoid the incidence of pulp exposure. Also, the cariogenic micro-organisms can survive remaining under restorations causing recurrent caries and restoration failure [1-3]. One of the solutions to overcome this problem is the use

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Rehabilitation of compromised permanent incisors with anatomically adjustable fiber post

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Purpose
To evaluate clinically and radiographically the rehabilitated compromised upper permanent central incisors with the everStick post.

Patients and methods
Thirty-six children patients aged from 10 to 16 years were divided into three equal groups (12 patients each). Group I, flared root canals of the patients were rehabilitated with the everStick post. Group II, flared root canals were rehabilitated with EasyPost/composite, and group III (control), unflared root canals were rehabilitated with EasyPost/core. The clinical parameters included the reinforced tooth, mucosa, temporary crown, and reinforcing system. The radiographical parameters were the periapical status, periodontal ligament condition, root fracture or resorption, and changes at the interfaces of the reinforcing system. All patients were followed up clinically and radiographically at 3, 6, 12 and 18 months.

Results
Both everStick and control group showed 100% clinical success, while EasyPost/composite group showed debonding of the reinforcing system in one patient with a clinical success rate of 91.7%, and the difference was not statistically significant ($P > 0.05$). Radiographic assessment showed no evidence of root fracture or external root resorption and no periodontal or periapical pathology that require crown removal for clinical interference. The radiographic findings showed 100% success rate for all studied groups.

Conclusion
The use of direct anatomical everStick posts in the rehabilitation of flared canals functioned well for 18 months with favorable clinical, radiographical, and aesthetic results.

Keywords:
anatomically adjustable fiber post, compromised permanent incisors, root canal reinforcement

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Introduction

The esthetic and functional rehabilitation of structurally compromised teeth presents a unique challenge to the restorative dentists. The compromised tooth may arise from carious extension, trauma to young permanent teeth, developmental anomalies, internal resorption, inappropriate root canal preparation, endodontic retreatment, and iatrogenic cause [1–3]. The compromised teeth with thin-walled roots are weak to withstand normal biting forces and so susceptible to fractures, which complicate the restorative procedure [4].

The traditional placement of retentive pins in a compromised tooth is impossible due to lack of dentinal support at the coronal portion of the root. For decades, the cast posts were used for the management of such teeth, but they compromised the aesthetics 'shine through phenomena', demonstrated a high risk of root fractures due to the marked difference in modulus of elasticity between metal post and dentin, and the coronal wedging forces at the already weakened root [5,6].

Endodontically-treated teeth with less than 2 mm thickness of dentin should be ideally rehabilitated before post placement. Several researchers showed that the use of dentin bonding agents, glass ionomer and composites can strengthen the tooth and produce leak-free restorations [2,7,8].

The fiber posts have a superior alternative to the metal posts due to their favorable biomechanical properties with less stress concentration and good optical properties [9,10]. However, it is difficult to place a single fiber post closely fitted in the flared canal, so the cement thickness increases that affect its physicochemical properties [11]. Furthermore, the bonding strength, core stabilization, and the retention are affected [12] which may compromise the long-term prognosis. Therefore, the direct anatomic post is used as an alternative approach in restoring the flared canal

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BIOACTIVE RESIN MODIFIED GIC *VS*. CONVENTIONAL ONE: IN VIVO AND IN VITRO STUDY

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ABSTRACT

PURPOSE: To evaluate the bioactive resin modified GIC material (Activa) *vs*. conventional one (Vitremer) clinically and laboratory.

Materials & Methods: Clinically: Fifteen healthy children of both sexes aged (4-7) having a bilateral similar initial occlusal caries on the lower 2nd primary molars were selected. A split-mouth design was used where conventional Class I cavities were prepared on carious molars. One side was restored with Activa and the contra-lateral side restored with Vitremer (control). The patients were recalled for clinical evaluation at 3, 6 and 12 months postoperative. The modified United States Public Health Service (USPHS) evaluation criteria were used. **Laboratory**: included: 1. Mechanical strength tests (compressive and diametral tensile). **2.** Shear bond strength test between both restorative materials and dentin. **Statistical analysis:** Mann Whitney test was used for clinical evaluation, while t-test and ANOVA were used for laboratory evaluation. The significance level was set at $P \leq 0.05$.

Results: Clinically: The overall clinical outcome showed no significant difference between both groups in all evaluated criteria ($p>0.05$). **Laboratory:** Activa showed higher values than Vitremer in all tested groups and the differences were significant ($p<0.05$)

Conclusion: Activa recorded better scores than Vitremer in nearly all tested clinical criteria but without significant differences between them during recall-time intervals. But, the laboratory differences in all tested groups were significant.

KEYWORDS: Bioactive resin modified GIC, Conventional resin modified GIC, Mechanical tests, Shear bond strength.

INTRODUCTION

Children are more susceptible to lose their natural teeth structure as a result of high caries index and great exposure to traumatic factors. Unfortunately, natural tooth structures have no or very limited capacity to regenerate and this necessitates replacement of such natural structure by suitable restorative materials. These materials should restore and maintain form, function, esthetic

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PLATELET-RICH FIBRIN AS A POSSIBLE AUTOGENOUS TRANSPORT MEDIUM FOR AVULSED TEETH: AN *IN VITRO* STUDY

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ABSTRACT

Objectives: Replantation of avulsed tooth depends on the viability of periodontal ligament cells. The aim of this study was to evaluate the survival of periodontal ligament cells (PDL) when placed in platelet-rich fibrin (PRF) transport media after an extra-oral dry time of 40 minutes.

Method: Forty human mandibular first premolar teeth with healthy periodontium and closed apices, previously planned for orthodontic extraction, were selected. The teeth were randomly divided into study group, PRF and control group, Hank's balanced salt solution (HBSS) as a reference medium. In both groups, the teeth were stored dry for 40 minutes, followed by 30 minutes immersion in the study and control media.

Results: There is a statistically significant increase in the number of viable PDL cells in PRF group as compared to reference medium group.

Conclusion: PRF demonstrated higher number of viable PDL cells and hence could be a suitable transport medium for avulsed teeth.

KEYWORDS: Platelet-rich fibrin, avulsed teeth

INTRODUCTION

Loss of teeth due to dento-alveolar trauma affects great part of the population especially the children; leading to significant negative functional, esthetic, and psychological problems on children.[1] Tooth avulsion is considered as the severe form of all traumatic dental injuries and it is characterized by complete displacement of the tooth out of its socket [2]. The incidence of avulsion reaches about 16% of all traumatic injuries affecting permanent teeth [3]. The most common age affected by injuries to permanent teeth occur between 7 and 10 years old secondary to falls, traffic accidents, violence, and sports practices [4].

Replantation is widely accepted as an effective solution for avulsed teeth but the prognosis of avulsed tooth cannot be predicted and depends on various factors such as extra-oral dry time, the storage medium, state of pulp vitality and periodontal tissues, root development and the period of splinting [5].

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148 Original article

Variance of occlusion among preschool monozygotic twins

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Aim
The aim of this study was carried to assess the occlusion in primary dentition among preschool monozygotic pairs.

Participants and methods
A cross-sectional study was performed on 20 pairs of healthy monozygotic twins of both sexes, aged 3–5 years. Occlusal measures included primary molar and canine relationships, the degree of overjet, overbite, anterior and posterior cross-bite. Space discrepancies included primate and physiologic spaces, and crowding. Arch dimensions included arch circumference, crown tooth width, palatal depth, and primary intermolar and intercanine widths.

Results
The results showed a very strong and significant relation for primary molar and canine relationships, for mandibular and maxillary tooth widths, and for palatal depth. A strong relation was found for overbite and for mandibular and maxillary arch circumferences. Meanwhile, a moderate and significant relation was found for overjet, and for intercanine and intermolar widths in both arches.

Conclusion
The occlusal variables showed a very strong intrapair correlation coefficient for all parameters except for arch circumferences and overbite which showed a strong correlation, whereas interarch widths and overjet showed moderate correlation. Therefore, the variance of occlusion in this study is suggested that the pairs are similar but not identical.

Keywords:
dental arch dimensions, monozygotic twins study, occlusal measures, primary dentition, space discrepancies

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Introduction

Twins studies have been used for assessment of the relative genetic and environmental influences on numerous dental traits. Twins are estimated to be about 1.9% of the world population. Twins may be either monozygotic (MZ) or dizygotic (DZ). MZ pairs represent 0.2% of the total – and 8% of all twins with a frequency of three to five per 1000 births [1,2].

MZ twins originated from the same fertilized ovum, they share almost all of their genetic variants, and many similar prenatal or early postnatal environments, whereas DZ twins develop from two fertilized eggs, so they only share 50% of their genetic variants [2,3].

MZ twins may be monochorionic monoamniotic, monochorionic diamniotic, or dichorionic diamniotic [4]. Approximately 60–75% of MZ are monochorionic [5]. If the zygote divides before lateral differentiation, MZ twins will be duplicates. If division occurs later on, the twins will display mirror image. Despite a high degree of symmetry between them, it was found differences both in 'duplicates' and in 'mirror imaging' [6].

MZ twins are genetically identical. Although genetic factors are naturally potent, the role of environmental factors can be increased and weaken the genetic factors. Therefore, any observed variances between them will normally reflect environmental factors and phenotypic discordance whereas differences between DZ pairs are due to gene–environment correlation [7].

Historically, twins were routinely used to assess the impact of genetic influence [8]. Twin and family studies have also sometimes shown the significant role of environmental factors [9]. The causes and nature of occlusal variation in primary dentition are still relatively scared [10]. Many factors contribute to this variation such as arch size and shape, tooth size and position, and the relationship of the mandibular and maxillary arch. Also, this variation may result from multifactorial inheritance pattern with genetic, environmental, and internal influences [11].

A wide range of environmental and residual differences has been suggested as predisposing factors to the

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Fracture resistance of rehabilitated flared root canals with anatomically adjustable fiber post

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Aim
This study aimed to evaluate the fracture resistance of the rehabilitated overflared canals with anatomically adjustable everStick post.

Patients and methods
Thirty extracted human maxillary central incisors with close similarity were selected. The specimens were coronally horizontally sectioned, endodontically treated and randomly divided into three groups ($n = 10$). Twenty of specimens were overflared, leaving 5 mm gutta percha seal. Group I: overflared specimens were rehabilitated with everStick post. Group II: overflared specimens were rehabilitated with EasyPost/composite. Group III (control group): specimens had normal unflared canals and were restored with EasyPost/core system. Composite resin was used to complete the core building-up for all groups. Fracture resistance of all specimens was measured using Instron testing machine. Statistical analyses were submitted to one-way analysis of variance and a post-hoc test. The level of significance was adopted at P value less than 0.05.

Results
The results showed that the control group recorded the highest fracture resistance values, followed by everStick and EasyPost/composite group and the difference was significant among them ($P < 0.05$). Mode of failures showed 76.7% of specimens exhibited a repairable mode of failure while 23.3% displayed nonrepairable mode. Root fracture was recorded in one specimen of everStick group and in two specimens of EasyPost/composite group, however, four specimens in the control group displayed EasyPost fracture.

Conclusion
The use of anatomically adjustable everStick post in rehabilitation of compromised teeth with flared canals seems to be significantly effective, promising in the improvement of fracture resistance, and increase the favorable mode of failure.

Keywords:
fiber post, fracture resistance, rehabilitated flared root canals

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Introduction

The restoration of endodontically treated teeth with extensive coronal destruction is still a great challenge to the dentist. These weekend teeth are more prone to fracture, especially at the cervical third. Therefore; there is a need to rehabilitate these teeth with techniques that will not compromise the integrity of their remaining thin-walled roots and the use of dowel-and-core systems to retain full and final crown restorations seems mandatory [1–4].

Custom or prefabricated metal posts were widely used and considered the gold standard for decades due to their superior mechanical properties. Conversely, metal posts showed several disadvantages as the high incidence of catastrophic root fracture [5], corrosion, inflammatory reaction, discoloration and shadowing on the periodontium in the anterior esthetic region [6,7]. Also, they need temporization that added time-consuming and increases the incidence of the

The restoration of compromised nonvital teeth with metal-free, biocompatible, and homogenous materials with improved their optical and physical properties have become a major objective in dentistry [4]. The prefabricated fiber posts with favorable biomechanical properties were developed to overcome the disadvantages of the metallic posts. Their modulus of elasticity and dentin-like rigidity are almost similar to dentin that significantly reduces the incidence of root fracture and displayed long-term durability [9]. They are less expensive, easier and faster to fabricate, and they can be simply and quickly removed from the root canals in the case of retrievability [10,11]. Furthermore, the adhesive and micromechanical bonding characteristics

Biologic reinforcement of compromised permanent incisors in children

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Purpose
The aim of this study was to evaluate the clinical and radiographic success of biologic primary incisors as intraradicular post–core reinforcement in management of compromised permanent incisors in children.

Patients and methods
Twenty-four children patients aged 10–15 years old were selected from Outpatients Clinic of Pedodontic Department, Faculty of Dentistry, Tanta University. The patients had upper permanent central incisors with flared canal indicated for intraradicular reinforcement. The patients were randomly divided into two groups, 12 patients each; biologic group were reinforced by human extracted primary incisors, and fiber post group that their compromised teeth were reinforced by fiber posts (EasyPost) with RelyX Unicem. Clinical assessment of jacket crowns, gingival health, reinforced permanent teeth, and intraradicular reinforcing system was recorded. The healthy periapical area (no pathosis), pathosis did not require immediate treatment and pathosis required immediate treatment were recorded as radiographic assessment. The children were followed up clinically and radiographically at 3, 6, 12, and 18 months after treatment.

Results
The overall clinical success rate of biologic group was 75 and 100% for fiber post group. There were no statistically significant differences in clinical assessment between the two groups ($P > 0.05$). The overall radiographic success rate of biologic group was 77.8 and 83% for fiber post group at the end of study. There were no statistically significant differences in radiographic assessment between the two groups ($P > 0.05$).

Conclusion
The use of extracted primary incisors as biologic post–core in rehabilitation of compromised flared upper central incisors have continued to function well for 1.5 years with overall clinical and radiographic success rate of 75 and 77.8%, respectively.

Keywords:
biologic reinforcement, children, compromised permanent incisors

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Introduction

The functional and esthetic rehabilitation of compromised flared endodontically treated teeth presents a unique challenge to the dentists, especially in cases of extensive crown–root destruction. The causes of flaring may be due to serious structural damage by carious lesions, previous restoration with large post diameters, overinstrumentation during root canal therapy, trauma to immature tooth, congenital dentinal defects, pulpal pathosis, internal resorption, or iatrogenic causes [1].

The restoration of severely damaged teeth that lack dentinal support at the root canal is difficult, even if they have been endodontically treated [2], and the placement of large cast post will resulted in catastrophic root fracture [3–5]. It may also cause corrosion, inflammatory reaction, and discoloration at the tooth's gingival margins [6]. Therefore, Christensen [7] stated that when nonmetal crowns are

The use of white opaque posts with good physical and optical properties can overcome the disadvantages of large metallic posts [8]. However, a potential drawback of the cosmo-post system is the fairly large diameter of the dowels and is very expensive.

Remaining dentin thickness less than 2 mm should be ideally reinforced before post placement [9]. The use of autocuring composite as intraradicular rehabilitation can be difficult because the dentist has no control of the rapidly polymerizing resin. The use of light-curing resin is preferred, but it only has a depth of 4–5 mm that may limit the transmission of light through the bulk of intraradicularly placed resin [10].

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EVALUATION OF ACCESSORY FIBER POSTS WITH SELF-ADHESIVE RESIN-MODIFIED GLASS IONOMER IN REINFORCEMENT OF STRUCTURALLY COMPROMISED UPPER PERMANENT INCISORS IN CHILDREN

Talat M. Beltagy*

ABSTRACT

Despite the technological advances in dentistry in recent years, there still exist a major challenges for restoring endodontically treated teeth in special cases where the root is weakened. **Purpose**: This study evaluated: 1- In vitro: the fracture resistance of over-flared root canals, which were rehabilitated with fiber posts with and without accessories associated with a self-adhesive resin-modified glass ionomer. 2- In vivo: clinically and radiographically the same reinforcing system which had been used in the in vitro study in restoring structurally compromised upper permanent central incisors in children.

Materials and methods: 1- In vitro: Fifty extracted caries-free human maxillary central incisors of nearly similar sizes, shapes and root anatomy, were selected. The teeth were coronally sectioned, endodontically treated and randomly divided into 5 groups, 10 specimens each. Group I: over-flared specimens were restored with only master fiber post. Group II: over-flared specimens were restored with master post and one accessory fiber post. Group III: over-flared specimens were restored with master posts and two accessories. All 3 groups used a self-adhesive resin-modified glass ionomer (GC Equia) as root reinforcing material and core build-up. Group IV (control group): over-flared specimens were restored with master posts associated with hybrid composite (Prime-Dent) as root reinforcing material and core build-up. Group V (control group): normal canals without over-flaring and were restored with only master post and self adhesive resin modified glass ionomer as core build-up material. All specimens were subjected to a load failure test with an incremental static force at an angle of 45 degrees to the long axis of the root. Fracture resistance, and mode of failure were measured and analyzed using one-way analysis of variance (ANOVA). **2- In vivo**: Thirty patients (10 -15 years) had a structurally compromised upper permanent central incisor with different degrees of flaring and indicated for rehabilitation using the same reinforcing system used in first 3 groups of in vitro study. Another ten patients were used as control group (normal canals) using only master post.

Result: The results of this study indicated that, the order of fracture resistance was as follows, control group V > IV = III > II > I, and the difference was significant ($P<0.001$), but there was no statistically significant difference in load failure between control group IV and III ($P = 0.999$). Mode of failure showed that 91.67% of specimens exhibited repairable mode of failure and 8.33% of specimens (in control groups) showed non-repairable mode of failure. In vivo results: Clinical evaluation, showed no displacement of reinforcing system or displacement of any fiber posts. There was no fracture in the core or the reinforcing material in any of tested groups. Radiographic evaluation showed no evidence of root fracture, external root resorption and no periapical or periodontal pathology requiring crown removal for clinical interference. The clinical findings showed 100% early success rate of reinforcing system in the studied technique for root rehabilitation.

Conclusion: The use of accessory fiber posts associated with self-adhesive resin-modified glass ionomer seems to be an effective method to improve fracture resistance, increase repairable failures of over-flared root canals, show promising results and appears to be a better alternative to single post in clinical practice.

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CLINICAL AND LABORATORY EVALUATION OF RESIN BASED AND GLASS IONOMER FISSURE SEALANTS IN PERMANENT MOLARS OF CHILDREN

Shimaa M. Hadwa*, Nahed AA. Abu Hamila**, Talat M. Beltagy*** *and* Gehan A. El-Oleimy****

ABSTRACT

Background: Over the last few decades, several advancements have been made in caries prevention. The use of pit and fissure sealant is one of the essential forms of prevention. Sealants protect the occlusal surfaces, inhibiting bacterial growth and providing a smooth surface.

Methods: Clinical study: Forty healthy children aged 6-10 years were selected from the outpatient clinic of the Pedodontic Department, Faculty of Dentistry, Tanta University. 40 molars were sealed with "Ionoseal" & 40 molars were sealed with "Fissurit F".

Laboratory study: Twenty caries-free human permanent premolars were collected and stored in 0.5% chloramines solution, then cleaned and stored in distilled water (20°C) until use. Shear bond strength was measured using a universal testing machine at cross-head speed of 1mm/min.

Results: For the clinical study, there was statistically significant difference between the two groups but the quality of restorations gradually decreased from 3-months visit to 9 months visit in both groups. "Fissurit F" had better clinical performance than "Ionoseal". Both materials showed similar results with respect to caries prevention. The bond strength of "Ionseal" was statistically lower than "Fissurit F".

Conclusion: The resin based fissure sealant had better clinical performance than glass ionomer cement. Both materials showed similar results with respect to caries prevention.

KEY WORDS: Fissure sealant, Retention, Caries state and Shear bond strength.

INTRODUCTION

Dental caries is an infectious, communicable disease resulting in destruction of tooth structure. This loss of tooth minerals begins on the outer surface of the tooth and can progress through the dentin to the pulp, ultimately compromising the vitality of the tooth [1].

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CLINICAL, RADIOGRAPHICAL AND HISTOPATHOLOGICAL EVALUATION OF AMNIOTIC MEMBRANE ALLOGRAFT PULPOTOMY IN PRIMARY TEETH

Talat Mohamed Beltagy* *and* Sarah Yasser **

ABSTRACT

Background: A novel dehydrated Human Amniotic Membrane (dHAM) allograft is a placental based scaffold that has been widely used in a verity of medical fields due to its unique regenerative ability in wound healing. **Objective:** To evaluate clinically, radiographically, and histopathologically the efficacy of dehydrated Human Amniotic Membrane allograf as a pulpotomy agent in primary teeth. **Materials and Methods**: **I- Clinical and radiographical evaluation:** This split-mouth, randomized clinical trial was conducted on 40 deeply carious primary molars indicated for pulpotomy. They were selected from 16 healthy children aged 4-8 years. They were randomly allocated into two equal groups (20 molars/each). Group 1: dHAM pulpotomy in one quadrant and Group 2: Formocresol (FC) pulpotomy in the contralateral. All molars were treated with the conventional pulpotomy technique. All patients were recalled for clinical and radiographical evaluation at 3, 6, and 9 months post-treatment. **II- Histopathological assessment:** A total of 30 healthy lower first primary molars and canines that indicated for serial extraction were selected for histopathological evaluation. The dHAM allograft and formocresol pulpotomies were performed (12 teeth/each group), where the other 6 teeth were used as a control. Six teeth from each experimental group were extracted at post-treatment intervals; one and three months. The samples were prepared for histopathological evaluation. All data were subjected to the exact test. Fisher exact test and Monte Carlo test were also used. The level of significance was set at $P<0.05$. **Results: I-Clinical and radiographic results:** The overall **clinical** success rates for both groups were 100%, whereas the overall **radiographic** success rates for dHAM and FC groups were 100% and 85%, respectively, but the difference was not statistically significant ($p>0.05$). **II-Histopathological results:** The overall evaluation at 1-month interval showed better histopathological criteria for dHAM group than FC group, but the difference was only significantly better on the degree of the inflammatory response ($p<0.05$). Whereas at 3-month interval, the dHAM group displayed significantly better histopathological criteria compared to the FC group ($p<0.05$). **Conclusion:** The dHAM allograft with its regenerative, biologic biocompatibility properties and its ability to deliver growth factors has shown successful outcome comparable to gold standard formocresol. Hence, it can be recommended as an alternative promising pulpotomy agent.

KEYWORDS: Amniotic membrane; Formocresol; primary molars; Pulpotomy.

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EVALUATION OF PROPOLIS EXTRACT AS A PULPOTOMY AGENT IN PRIMARY MOLARS

Talat M Beltagy* *and* Nagwa A Ghoname**

ABSTRACT

Formocresol pulpotomy of primary teeth has long-term clinical use and success, but concerns over its toxicity and mutagenicity have prompted research into other pulpotomy techniques. Propolis has been known as a natural antibiotic and has been subject of medical and dental research due to its therapeutic properties such as antibiotic, anti-inflammatory and analgesic effect. The present study was performed to evaluate the clinical, radiographical and histological changes of the pulp following propolis extract pulpotomy in primary molars. For clinical and radiographical study, twenty children aged from four to eight years old were selected from Out-patient Clinic of Pedodontic Department, Faculty of Dentistry, Tanta University. Each child had at least two lower primary carious molars (1st and/or 2nd) indicted for pulpotomy where assigned randomly into two groups; propolis pulpotomy (study group) in one quadrant and formocresol pulpotomy (control group) in the second quadrant. All teeth were treated with the same conventional pulpotomy technique. Clinical and radiographical evaluations were done for one year. For histological examinations, eighteen primary first molars that formerly planned for serial extraction were selected. Pulpotomy was done on eight teeth with propolis extract and another eight teeth with formocresol, while the remaining two teeth were used as a control. Nine teeth were extracted after each of the post-treatment interval at one and three months. The results showed that three children with 6 pulpotomized teeth failed to return for any follow-up evaluations in the clinical and radiographical study. The overall clinical success rate was 94.12 % for propolis extract and 88.24% for formocresol after one year, while radiographically the success rates were 94.12 % and 82.35% in both groups respectively. Histological examination showed variety of responses, at the first month, there were mild inflammation, irregular odontoblasts, and few intra pulpal calcifications in propolis group. While, formocresol group showed fibrosis, no had tissue formation and degenerated odontoblasts. At three month, there were increased calcifications, incomplete dentinal bridges and regular odontoblastic layer in propolis group, while in formocresol group liquefaction necrosis with micro abscess formation were observed. In conclusion, propolis extract showed clinical, radiographical and histological success as a dressing material following pulpotomy in primary teeth after a short term evaluation period.

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DENTISTS' KNOWLEDGE OF AND ATTITUDES TOWARD RECOGNISING AND REPORTING CHILD ABUSE AND NEGLECT IN EGYPT

Khattab A.M.* and Beltagy TM.*

ABSTRACT

Objectives: Child abuse is a disturbingly common occurrence in all societies today. No clear data about child abuse in Egypt have been reported. The objective of this study was to explore, using a questionnaire, dental students' and professionals' educational experiences and knowledge concerning child abuse/neglect. **Materials:** This study was conducted through a questionnaire that consisted of 31 questions based on the literature and distributed to 2,000 fifth-year students, interns, paediatric dentistry specialists and oral surgery specialists in different dental colleges in Egypt. The participants were instructed to answer all of the questions. The questionnaire investigated the participants' demographics, education, perceived responsibilities concerning child abuse, suspicions, action taken and reasons for inaction, and knowledge regarding definitions, signs and symptoms of child abuse. Data were collected and analyzed. **Results:** Of the 2,000 surveys distributed, only 182 were returned, yielding a response rate of 9.1% for our questionnaire. Most of the respondents were general practitioners (41.8%). In answering questions about their ability to identify abuse cases, 73.1% of the respondents thought that they could identify abuse, but only 45.1% had encountered suspected abuse and 19.2% had reported abuse cases. When we asked the participants 10 questions about the factors that might prevent them from reporting abuse, 76.9% cited the possible consequences for the child, 73.6% cited the lack of adequate history to determine the main problems related to this issue, 70.3% cited the family's hostility, 69.2% cited the possible effect on child's family, 67% cited their uncertainty about the signs and symptoms of abuse, 62.6% were unsure about the consequences of reporting abuse, 53.8% feared litigation, 52.7% cited concerns about confidentiality, 45.1% cited the possible effects on their careers and 35.7% reported thinking there was no legal obligation to report suspected child abuse. **Conclusions:** More information and training is required to raise awareness of the potentially important role of dentists in protecting children from abuse. We need to revise the dental curricula to provide more information, including clinical practice sessions, regarding child abuse and neglect.

KEY WORDS: Child abuse, child neglect, dental education, paedodontics, curriculum, legal responsibility, ethics.

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IN VITRO DETERMINATION OF FRACTURE RESISTANCE OF ROOTS REINFORCED WITH DIFFERENT ADHESIVE MATERIALS

Talaat Beltagy* Fatma A. El-Hindawy** Hatem A. Alhadainy*** and Usama M. Abdel Keriem****

ABSTRACT

The crowns of 50 upper central incisors were resected and their root canals were prepared and obturated. The root canal filling was removed with heated carriers except the apical 4-5 mm. The canal spaces of 30 roots were further flared by routing out the internal dentin and the roots were equally divided into three groups. Each group was treated with one of the reinforcing materials that were composite, polyacid modified resin and resin modified glass ionomer. The remaining 20 roots were used as control and equally divided into two groups. Ten roots without flaring were used as negative control and 10 roots were flared as experimental groups but without material reinforcement. Nickel-chrome post-and-cores were fabricated for all groups and cemented with a glass ionomer cement. The roots were individually embedded in auto-cured acrylic resin molds. The fracture resistance was evaluated using a universal testing machine. The forces were evaluated and statistically analyzed using one way analysis of variance (ANOVA). The results indicated that negative control group (normal canal without flaring) showed significantly the highest fracture resistance followed by Dyract, Composite resin, and Vitremer respectively. Positive control (flared without reinforcement) was significantly the lowest fracture resistance ($p<0.001$). So, rehabilitation of the post space with adhesive materials and post can significantly improve fracture resistance of a weakened root.

INTRODUCTION

For many years, dentists have been faced with the problem of restoring endodontically treated teeth due to lacking of the intrinsic strength of vital teeth. Reasons postulated for such brittleness include loss of dentin as a result of access cavity and root canals preparations and the overall loss of moisture from dentin [1-2]. Therefore root augmentation is necessary to increase the strength of endodontically treated teeth. Karna [3] assumed that, post-and-core procedures can provide fracture resistance of the treated root. However, the reinforcement effects from posts appeared limited and recent studies suggested that posts may weaken the endodontically treated teeth [4-6].

The introduction of materials capable of bonding to dentin has created potential for rehabilitation of lost dentinal tissues to save severely damaged

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THE EFFECT OF APICAL APPLICATION OF A DENTIN BONDING AGENT ON THE SEALING ABILITY OF DIFFERENT RETROFILLING MATERIALS

Hatem A. Alhadainy;* Usama M. Abdel Karim** and Talaat El_Beltagy***

ABSTRACT

Canals of 80 extracted human single rooted teeth were shaped using a Protaper System. The canals were then obturated with laterally condensed Resilon /Epiphany sealer system. The coronal access openings of all roots were sealed with Cavit. The apical 2 mm of all roots were resected and 60 roots received apical cavity preparations. These cavities were filled with amalgam, glass ionomer and Mineral Trioxide Aggregate (MTA). Control groups received no apical cavity preparation. All groups were then subdivided so the resected root ends of 10 teeth from each group treated with a dentin bonding agent. All roots were covered with double layers of nail polish including the coronal surfaces, except for the apical 2 mm. After immersion in a solution of India ink for 7 days, the roots were demineralized, cleared and examined with stereomicroscope for the greatest depth of linear dye penetration. The data were statistically analyzed using ANOVA test and Least Significant Difference (LSD) Fesher test. MTA showed the least significant amount of dye penetration followed by glass ionomer, Resilon, and amalgam ($p<0.001$). The subgroups covered with dentin bonding agents showed significantly less leakage than those without the bonding agent.

INTRODUCTION

The objective of surgical endodontic therapy is to remove bacteria and effectively seal the apical portion of the root canal system, thus promoting osseous regeneration. The quality of this apical seal is believed to be an important factor in the promotion of healing after periapical surgery[1]. Therefore, many surgical endodontic studies have focused on the sealing ability of retrofilling materials.

Resilon is a thermoplastic polymer-based root canal filling material, and contains bioactive glass and radiopaque fillers. It performs like gutta-percha, has the same handling properties, and for retreatment purposes may be softened with heat or

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CLINICAL AND RADIOLOGICAL ASSESSMENT FOR RETROFILLINGS OF REINFORCED ROOTS: A 2-YEAR EVALUATION

Hatem A. Alhadainy;* Talat M. Beltagy;** Usama M Abdel Kereim*** and Ahmed H. Labib****

ABSTRACT

Thirty patients had severely damaged permanent upper central incisors with different degrees of canal flaring and periapical lesions indicated for apicectomy were participated in this study. All canals were reinforced using composite resin. A plastic burnout casting post and a green wax were used to fabricate a pattern to be cast in nickel-chrome post-and-core. The post was cemented to the canal and alginate impression was taken for fabrication of an acrylic jacket crown that was cemented with a glass ionomer luting cement. The patients were then received surgical apicectomy. The patients were divided into three equal groups of ten patients in each group. The retro-cavities were filled with one of the tested materials which were; amalgam, polyacid modified resin and resin modified glass ionomer cement. The patients were followed up clinically and radiographically after 3, 6, 12, 18 and 24 months. Data were collected and statistically analyzed using Kruscal-Walis test. The results indicated that all teeth appeared clinically normal. Statistical analysis showed no significant difference between the tested groups. Radiographic evaluation revealed no new periapical radiolucency and showed disappearance of a pre-existing ones. All materials provided a satisfactory performance with no significant difference.

INTRODUCTION

The compromised tooth that has extensive structural damage presents a challenge to the restorative dentistry. Tooth structures may be compromised by multitude of causes such as gross carious extension, traumatic injuries, pulpal lesions, internal resorption, congenital dentinal defects, and iatrogenic causes[1]. When roots are hollowed out with any of such defects leaving only a thin collar of coronal dental structure, the tooth probably should be extracted. In such case, orthodontic

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The First International Dental Conference

" Future Vision of Dentistry "

24-25/12/2008

The scientific committee of the First International Dental Conference organized by the Faculty of Dentistry, Tanta University certify that:

Dr. TALAT MOHAMED BELTAGY

Has presented his poster entitled:

"Comparison Between Human Enamel Shell and Resin Veneer Restoration in Young Permanent Incisors"

Through the scientific activities of the conference.

Secretary General
(Prof.Dr. Mahmoud El-Shenawy)

President
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ت : ٠٤٠/٣٣٤٥٣١٤ فاكس : ٠٤٠/٣٣٤٤١٧٣

COMPARISON BETWEEN HUMAN ENAMEL SHELL AND RESIN VENEER RESTORATION IN YOUNG PERMANENT INCISORS

*Talat Mohamed Beltagy**

ABSTRACT

Patients with hypoplastic or sound but discolored teeth often request restorations designed to improve their appearance. Such restorations might include veneer restorations using a tooth shaded material to cover the labial surfaces of unattractive teeth. Presently, secure methods of sterilization and storage are available to ensure the safety of a tooth or tooth fragment from a tooth bank, encourage the use of human natural veneer to preserve the integrity of patient's natural dentition. The purpose of this study was to compare: 1- Clinical and radiological success of human enamel shell and composite resin veneer in restoring discolored and hypoplastic young permanent incisors. 2- Bacteriological colonization of one cariogenic microflora (*Streptococcus mutans*) on both veneers restoration. Materials and Methods: This study was carried out on 13 patients aged from 11-15 years who their upper anterior teeth (44 teeth) indicated for veneer restorations due to intrinsic discoloration or hypoplasia. The patients were divided into two groups: Test group: included 22 discolored and hypoplastic teeth that restored by human enamel shells as veneer restorations. Resin group: included 22 discolored and hypoplastic teeth that restored by composite resin veneer restorations (control group). Clinical, radiographical and bacteriological assessments were recorded for each patient at 3, 6 and 12 months after restorations. Clinical assessment criteria included: 1- Veneer restorations: included veneer color stability and veneer retention. 2- Veneered tooth evaluation included: pain, fracture and mobility. 3 - Gingival health included: Plaque index (PI), gingival index (GI) and bleeding point index. Results: This study showed that, plaque and gingival indices were increased in resin control group than in test group during follow up, but the difference was not significant between them (P>0.05). Bleeding point index showed that, no significant change in test group during recall time, but there was a significant increase between times in resin control group (P=0.001). Also, the difference was significant between two groups at 6-months (P=0.039) but no significant differences between them in other recall time (P>0.001). As regard color stability and bacterial assessment; test group showed more color stability and less S. mutans colonization than in resin control group and the difference was significant at 6 and 12 months of follow up (P=0.013) & (P<0.001) and (P=0.019) & (P=0.024) respectively, while veneer retention assessment showed that, no significant differences between two groups during recall time (P>0.05).

INTRODUCTION

Restoring young permanent incisors can be a strenuous task for many dentists who would like to have an esthetic, easy-to-use and relatively quick restoration for such children, but the restoration of discolored and deficient incisors give the dentist satisfaction of knowing that he/she has restored the smile and self-confidence of a growing child [1].

Discoloration and labial defects of the teeth may be arising from amelogenesis imperfecta, enamel hypoplasia, necrosis, root canal treatment, tetracycline staining, other drugs, excessive fluoride or the presence of large resin fillings that have discolored the tooth. Patients often request cosmetic improvements in their anterior teeth, frequently; such improvement also improves the patient's sense of wellbeing and self-eastern [2].

The ideal anterior restoration should be easily placed, inexpensive, durable and esthetic [3]. Optimal esthetics should be clearly the treatment goal wherever possible for the well-being of children and parents [4].

The conservative treatment options such as bleaching and micro-abrasion can dramatically improve severely discolored teeth, but it is expensive and the results are variable and hard to predict. So, it may minimize the removal of discolored enamel and dentin prior to the provision of veneers [5,6].

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The scientific committee of the First International Dental Conference organized by the Faculty of Dentistry, Tanta University certify that:

Dr. NAGWA A. GHONAME
&TALAT M. BELTAGY

Have presented their poster entitled:

"Oral Health Status of Children Undergoing Hemodialysis"

Through the scientific activities of the conference.

Secretary General
(Dr. Ezz Mahmoud El-Shenawy)

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ت : ٠٤٠/٣٣٤٥٣١٤ فاكس : ٠٤٠/٣٣٤٤١٧٣

ORAL HEALTH STATUS OF CHILDREN UNDERGOING HEMODIALYSIS

Nagwa A. Ghoname and Talat M. Beltagy***

ABSTRACT

Although many complications of chronic renal diseases can now be prevented or treated effectively, these therapeutic advances have introduced new problems, including concerns of oral health. The purposes of this study were to assess the oral health status and to investigate the cariogenic microflora in children undergoing hemodilaysis. The study was carried out on 32 children aged from 8-14 years old. Sixteen children (10 boys and 6 girls) were undergoing hemodialysis at Paediatric Nephrology Units, Tanta University Hospital and Al-Mabrra Hospital, Al-Mahalla, Gharbiya governorate. The other sixteen healthy children with matched age (control group) were randomly selected from Pedodontic Clinic, Faculty of Dentistry, Tanta University. Clinical examination was performed for each child in both groups to assess caries index, enamel defects, discolorations, as well as gingival and plaque indices. *Streptococcus mutans* and *Lactobacillus* counts in saliva were investigated using selective culture media. Each child was assessed for frequency of daily tooth brushing. The results showed that, caries index, *Streptococcus mutans* and *Lactobacillus* counts were significantly decreased in children undergoing hemodialysis. 62.5% of children with chronic renal failure demonstrated various degrees of enamel defects in the permanent teeth, while, extrinsic and intrinsic discoloration represents 56.25% and 12.5% respectively. Gingival index was increased, while, the difference in plaque index was not statistically significant between the two groups. Both groups showed no significant differences in daily tooth brushing frequency. In conclusion, dental and medical care should be closely integrated for children undergoing hemodialysis to avoid the undesirable sequel as well as health education, including oral hygiene instructions, in order to improve their overall oral health.

INTRODUCTION

Chronic renal failure and end stage renal disease have become world wide public health problems, these conditions increase the patient morbidity and mortality risks and put major economic strain on the health care system.[1,2]

Chronic renal failure (CRF) is defined as a progressive decline in renal function associated with reduced glomerular filtration rate which leads to an increase of serum creatinine and blood uric nitrogen resulting in state of intoxication called uremia. [3-5]

The treatment of CRF includes dietary changes, correction of systemic complications, and dialysis or renal graft receipt. Dialysis is an artificial mean of removing nitrogenous and other toxic products of metabolism from the blood.[6,7] There are two modalities currently used, peritoneal dialysis (PD) and hemodialysis (HD), in hemodialysis blood filtration is carried out by a machine equipped with semipermeable membrane allowing passage of excess fluid and waste products, and most of patients receive HD three times each week. [8,9]

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INVESIBLE DENTAL TRAUMA SPLINT IN CHILDREN (A COMPARATIVE STUDY)

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ABSTRACT

Luxation injuries of permanent teeth are an increasing emergency in the dental office. Children and adolescents are particularly prone to dental trauma due to participation in risky activities. Stabilization by a dental labial splint is the standard of care. Most labial splints are poorly tolerated by the patients, they are usually bulky which may interfere with speech, lead to food accumulation and patients also dislike them because they are often unsightly. **Purpose**: this paper describes a new splinting technique (lingual bonded splint) which offers improved comfort to the patient and dentist. **Materials and Methods**: Twenty children patients aged from (11-15 years) had one of upper permanent central incisors indicated for immobilization due to traumatic subluxation associated with or without crown fracture (complicated or uncomplicated). The patients were classified into two groups (10 patients of each). **Invisible group**: Splinted with bonded lingual splints (**BLS**). **Visible group**: Splinted with traditional wire-composite splints (**WCS**). Study parameters after 1, 7 and 14 days included, splint retention, comfort, working time, esthetic satisfaction, and periodontal ligament condition as tooth percussion, mobility, plaque and bleeding on probing. Both splints were left in place for 14 days. **Results**: **BLS** showed less working time and more esthetic satisfaction and the difference was significant ($P<0.01$). Also, there was a significant increase in bleeding on probing in **WCS** group after 14 days ($P<0.05$) but there was no significant difference between two groups in the other parameters.

INTRODUCTION

Traumatic dental injuries to the permanent dentition occur commonly in children with up to 22% of children suffering from trauma to the permanent dentition before leaving school.[1-4] Management of these patients poses a challenge to the clinician, not only as these injuries often imply a combined injury to both the pulp and periodontal tissues, but also because the possible long term healing complications may arise after the trauma.[5]

It is generally accepted that teeth subjected to trauma should be splinted after repositioning of the tooth to prevent further injury to the pulp or the periodontal ligament during the healing phase. Also, splinting method is an important issue in trauma therapy.[6-8]

Ideally the splinting of traumatized teeth should be an easily fabricated in the mouth without additional trauma and fast procedure for the dentist, passive unless orthodontic forces are intended, non irritating to soft tissues, comfortable and easy to keep clean for the patient. The splint should allow some physiologic mobility to promote healing of periodontal tissues and prevent pulp necrosis and not interfere with occlusion.[9] The splint should allow proper oral hygiene, avoiding accumulation of food debris and plaque in the sulcus, allow follow-up treatment (ie, endodontics) and sensitivity testing during immobilization. Also adequately stabilized the tooth through the required splinting period. Lastly, it should be easily removed.[10]

Clinically, injuries to the periodontal ligaments may be characterized by altered tooth mobility, tooth displacement, and bleeding from the sulcus. The current classification of injuries to the periodontal tissues includes concussion, subluxation (traumatic loosening), extrusive luxation, lateral luxation, intrusive luxation & avulsion.[9]

Flores et al (2001)[11] stated that, the International Association of Dental Traumatology suggested the splinting times for luxated permanent teeth as a follows: Concussion: for 7-10 days, subluxation: for a short period of time (2 to 3 weeks), extrusion: for up to three weeks, lateral luxation: for up to three weeks, for intrusion: the author suggest at least three to four weeks of splinting time following surgical repositioning & lastly, for avulsion: apply a flexible splint for 1 week.

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