

الأستاذة الدكتورة  
إيناس أحمد علي الجندى



عميد كلية طب الفم والأسنان  
أستاذ طب الفم وأمراض اللثة  
جامعة كفرالشيخ

## سيرة ذاتية

### البيانات الشخصية

- الاسم: ا. د/ ايناس احمد الجندي.
- الوظيفة الحالية: عميد كلية طب الفم والاسنان - جامعة كفر الشيخ واستاذ بقسم طب الفم وامراض اللثة وطرق التشخيص.
- آخر مؤهل دراسي: دكتوراه طب الفم وامراض اللثة- كلية طب الاسنان - جامعة طنطا.
- العنوان: 37 ش الشوربجي تقاطع شارع هارون الرشيد- طنطا - الغربية
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### الدرج الوظيفي:

- عميد كلية طب الفم والاسنان من اكتوبر 2020 الى الان .
- مارس 2020/ اكتوبر 2020: استاذ بقسم طب الفم وامراض اللثة وطرق التشخيص - كلية طب الفم والاسنان- جامعة كفر الشيخ .
- 2018/2019: أستاذ مساعد بقسم طب الفم وامراض اللثة وطرق التشخيص - كلية طب وجراحة الفم والاسنان- جامعة كفر الشيخ .
- 2016/2018: أستاذ مساعد بقسم طب الفم وامراض اللثة وطرق التشخيص - كلية طب وجراحة الفم والاسنان- جامعة الدلتا .
- 2015/2016: أستاذ مساعد بقسم طب الفم وامراض اللثة وطرق التشخيص - كلية طب وجراحة الفم والاسنان- جامعة 6 اكتوبر .
- 2010/2015: مدرس بقسم طب الفم وامراض اللثة وطرق التشخيص - كلية طب وجراحة الفم والاسنان- جامعة 6 اكتوبر .
- 2006/2010: اخصائى طب الفم والاسنان بوزارة الصحة بالغربية
- 1998/2006: طبيب اسنان بوزارة الصحة بالغربية
- 1997/1998: طبيب امتياز بكلية طب الفم والاسنان جامعة طنطا

### المؤهلات العلمية:

البكالوريوس

تاريخ الحصول على البكالوريوس في طب وجراحة الفم والاسنان - كلية طب وجراحة الفم والاسنان - جامعة طنطا: 1996

**الماجستير**

تاريخ الحصول على الماجستير: يونيو 2005

عنوان الرسالة : تأثير شرائح من الكلور هيكسيدين على البى جنجيفالس وعلى كثافة العظم في مرض التهاب النسيج حول السنى عند البالغين

Effect of local application of Chlorhexidine gluconate chips on *porphyromonas gingivalis* and alveolar bone density in chronic periodontitis.

**اسماء المشرفين:**

أ.د/ ماهر التونسي أستاذ قسم طب الفم وامراض اللثة - كلية طب الفم و الأسنان - جامعة طنطا

أ.د/ ابتسام الزفراقي أستاذ قسم طب الفم وامراض اللثة - كلية طب الفم و الأسنان - جامعة طنطا

أ.د/ هالة فؤاد أستاذ الميكروبىولوجى - كلية الطب- جامعة طنطا  
الدكتوراه

تاريخ الحصول على الدرجة: نوفمبر 2009

عنوان الرسالة : تقييم استخدام غشاء الشيتورزان بإضافة أو بدون إضافة البلازما الغنية بالصفائح الدموية في علاج مرض انحسار اللثة دراسة إكلينيكية عشوائية منضبطة

Evaluation of Chitosan Membrane with or without Autologous Platelet Rich Plasma in the Treatment of Gingival Recession: A Randomized Controlled Clinical Study.

**اسماء المشرفين:**

أ.د.سامية درويش - أستاذ قسم طب الفم وامراض اللثة - كلية طب الفم و الأسنان - جامعة طنطا.

أ.د. سامية سراج - أستاذ قسم طب الفم وامراض اللثة - كلية طب الفم و الأسنان - جامعة طنطا.

أ. د. امال الدبيب - أستاذ بقسم باثولوجيا الفم - كلية طب الأسنان- جامعة طنطا.

**الخبرات الإدارية:**

- 2021/2024: عميد كلية طب الفم والاسنان - جامعة كفر الشيخ بالقرر  
الجمهورى 291 لسنة 2021

- 2020/2021: قائم بأعمال عميد كلية طب وجراحة الفم والاسنان - جامعة كفر الشيخ بالقرار رقم ( 1430 ) للعام الأكاديمي 2020 / 2021 بتاريخ 2020/10/5 م.
- 2024: عضو في قوائم الممكين لفحص الانتاج العلمي لشفل وظائف الاساتذة والاساتذة المساعدين - الدورة الثالثة عشرة (2026-2022).
- 2020: عضو في قوائم الممكين لفحص الانتاج العلمي لشفل وظائف الاساتذة والاساتذة المساعدين - الدورة الثالثة عشرة (2019-2022).
- 2023/2022: قائم بأعباء ومهام رئيس قسم طب الفم وامراض اللثة - كلية طب وجراحة الفم والاسنان -- جامعة كفر الشيخ بالقرار رقم 1001 بتاريخ 2022/8/1
- 2021/2020: قائم بأعباء ومهام رئيس قسم طب الفم وامراض اللثة - كلية طب وجراحة الفم والاسنان -- جامعة كفر الشيخ بالقرار رقم 942 بتاريخ 2021/7/28
- 2020/2019: قائم بأعباء ومهام رئيس قسم طب الفم وامراض اللثة - كلية طب وجراحة الفم والاسنان -- جامعة كفر الشيخ بالقرار رقم (1410) للعام الأكاديمي 2019 / 2020 بتاريخ 2019/7/14 م.
- 2018/2020: مدير لوحدة ضمان الجودة - كلية طب وجراحة الفم والاسنان - جامعة كفر الشيخ بالقرار رقم (946) بتاريخ 2018/9/12م والقرار رقم 1447 بتاريخ 2020/10/6 .

#### الأبحاث العلمية والنشر الدولي:

- 2024: (كولاجين العاج مقابل الليزر YAG Er: كمعدلات حيوية سطحية لشراحت الجذر السليمة التي تحاكي الجذور المعاد زرعها المتأخرة) – مجلة الطب الضوئي وجراحة الليزر.
- 2023: (التقييم السريري والشعاعي لجسيمات العاج النانوية ذاتية المنشأ في علاج التهاب اللثة في المرحلة الثالثة: دراسة سريرية لانقسام الفم) – مجلة الجمعية الطبية الباكستانية.
- 2023: (تأثير مستوى إنترلوكين-6 والبروكالسيتونين على تطور المظاهر الفموية في مرضي COVID-19 في المستشفى) – مجلة الجمعية الطبية الباكستانية.
- 2023: (تأثير الكورتيكوستيرويد والأدوية المثبتة للمناعة على المظاهر الفموية لدى مرضي COVID-19 في المستشفى) – مجلة الجمعية الطبية الباكستانية.
- 2023: (طعم العاج غير المعالج مقابل الطعم الخارجي حول زراعة الأسنان الموضوعة على الفور في المنطقة الأمامية لفك السفلي: تجربة سريرية معشاة ذات شواهد) – المجلة الدولية لزراعة وجراحة الفم والوجه والفكين.

- 2021: (المظاهر الفموية لمرضى كوفيد-19: تقريران عن حالة لمرضى مصريين) – مجلة J البحث الطبية علوم الأسنان.
- 2021: (مقارنة بين رانيلات الستروننتيوم وهيدروكسبياتيت المستبدل بالمعادن كمواد تعقيم في علاج العيوب العظمية المحيطة بالزرع مع الغرسات الفورية (دراسة سريرية وتجريبية) - المجلة الدولية للبحوث المتقدمة..
- 2020: (دراسة سريرية وتشخيصية إشعاعية لمواد الستروننتيوم رانيلات ومواد تعقيم العظام المستبدلة بالمعادن هيدروكسبياتيت في مرض السكري مع التهاب اللثة المزمن) – مجلة طب اللثة المتقدم وزراعة الأسنان.
- 2020: (دراسة إشعاعية وهستوكيميائية مناعية لمواد عظمية هيدروكسى أباتيت المستبدلة بالمعادن في داء السكري المصاحب للتهاب الأسنان المزمنة) - المجلة الدولية للبحوث المتقدمة.
- 2019: (القياس الطيفي للأشعة فوق البنفسجية للإصدار المستدام لرينلات الستروننتيوم المحمّل على غشاء الفيبرين الغني بالصفائح الدموية: دراسة في المختبر) - مجلة علوم الحياة.
- 2019: (تقييم غشاء الستروننتيوم رانيلات في علاج تراجع اللثة: دراسة نسيجية في الكلاب) - مجلة علوم الحياة.
- 2019: (تقييم التأثير الوقائي لفيتامين (د) على ترقق عظام الفك السفلي الذي يسببه الكورتيكوستيرويد وأشعة جاما) – المجلة الدولية لأبحاث الإشعاع.
- 2019: (أهم 5 آفات فموية لدى الأطفال في وسط دلتا النيل) - مجلة طب الأسنان المصرية.
- 2019: (تأثير الجسيمات النانوية المحمّلة بالميترونيذازول في علاج عيوب اللثة المستحثة في الكلاب) – مجلة طب الأسنان المصرية.
- 2018: (تأثير أحماض أوميغا 3 الدهنية على مرضى التهاب دواعم الأسنان المزمن في النساء بعد سن اليأس: دراسة سريرية عشوائية) – مجلة صحة الفم وطب الأسنان الوقائي.
- 2017: (مقارنة بين التطبيق المحتلي للجسيمات النانوية المحمّلة بالدوكسايكلين وجel الدوكسيسيكلين التقليدي على بروتين ماتريكس ميتالوبروتيناز 1 وكثافة العظام في التهاب اللثة المزمن) – مجلة طب الأسنان المصرية.
- 2016: (تأثير جل الأوزون على كثافة العظام السنخية ونزع الأكسجين الفائق في التهاب اللثة المزمن: دراسة سريرية عشوائية) – مجلة طب الأسنان المصرية.
- 2016: (الإنزيم المساعد 10 Q كمكمل غذائي مع الكورتيكوستيرويد الموضعي في علاج الأفة التاكلية للحراز المسطح الفموي) – مجلة طنطا لطب الأسنان.

- 2015: (تقييم التغيرات في الواسمات السريرية والكميائية الحيوية وقياسات الحساسية الإشعاعية لدى المدخنين الذكور المصريين المصابين بالتهاب دواعم السن المزمن) - المجلة المصرية لطب الاسنان.
- 2015: (التقييم السريري والإشعاعي للنانوكريستالين هيدروكسبياتيت مع أو بدون غشاء الفيبرين الغني بالصفائح الدموية في علاج عيوب اللثة داخل اللثة) - مجلة الجمعية الهندية لأمراض اللثة.
- 2014: (تقييم مستوى إنزيم ديسموتاز الفائق في السائل الحزامي اللثوي في التدخين) - مجلة طب الأسنان المصرية.
- 2014: (تقييم غشاء الكيتوزان مع أو بدون البلازمـا الغـنية بالـصفائح الدـموـية الذـاتـية في عـلاـج تـرـاجـع اللـثـة: درـاسـة سـرـيرـية عـشـوـائـية) - المـجلـةـ العـلـمـيـةـ لـجـامـعـةـ 6ـ أـكتـوبرـ.
- 2014: (تقييم غشاء الكيتوزان مع أو بدون البلازمـا الغـنية بالـصفائح الدـموـية الذـاتـية في عـلاـج تـرـاجـع اللـثـة: درـاسـة نـسـيجـيـةـ فـيـ الـكـلـابـ) - المـجلـةـ العـلـمـيـةـ لـجـامـعـةـ 6ـ أـكتـوبرـ.
- 2014: (فعالية أوميغا 3 في علاج التهاب الفم القلاعي المتكرر وتحسين نوعية الحياة: دراسة عشوائية مزدوجة التعميم بالغفل) - مجلة جراحة الفم وطب الفم وعلم أمراض الفم وأشعة الفم.
- 2013: (تأثير مرض السكري على مستويات المصل والسوائل المشقوقة اللثوية (GCF) من البنراكسينات الطويلة (PTX3) في المرضى الذين يعانون من التهاب دواعم السن المزمن دراسة تجريبية) - المجلة المصرية لطب الاسنان.
- 2013: (إعادة زرع الأسنان اليائسة بسبب أمراض اللثة باستخدام الحفر الجراحي للزرع: دراسة تقرير الحالة) - مجلة طنطا لطب الاسنان.
- 2013: (تأثير التطبيق الموضعي لجل زيت شجرة الشاي (Melaleuca Alternifolia) على مستوى البنراكسين الطويل عند استخدامه كعلاج مساعد للتهاب اللثة المزمن: دراسة سريرية عشوائية) - مجلة الجمعية الهندية لأمراض اللثة.
- 2013: (تغطية عيوب انحسار اللثة باستخدام غشاء الشيتوزان مع وبدون البروتين العظمي المكون 2 في الكلاب) - المجلة المصرية لطب الاسنان.
- 2012: (دراسة نسيجية ونسيجية لتأثير رانيلات سترونتيوم على شفاء عيوب اللثة داخل جدار واحد في الكلاب) - مجلة علم الخلايا والأنسجة.
- 2012: (التأثير السريري والنسجي للبيسفوسفونات مقابل جل سترونتيوم رانيلات على الاندماج العظمي حول زراعة الأسنان) - المجلة المصرية لطب الاسنان.

- 2012: مع سرطان الخلايا الحرشفية في الشفاف: Xeroderma Pigmentosa مراجعة الأدب وتقرير حالة) – المجلة المصرية لطب الاسنان.
- 2012: (تأثير التطبيق الموضعي لإدخالات الشيتوزان على ديسوموتاز الفائق وكثافة العظام السنخية في التهاب دواعم السن المزمن: دراسة سريرية عشوائية محاكمة) - المجلة المصرية لطب الاسنان.
- 2012: (المظهر الشفوي لعدم الحساسية الخلقية للألم: تقرير حالة) - المجلة المصرية لطب الاسنان .
- 2011: (دراسة مقارنة بين الكيتوزان منخفض الوزن الجزيئي داخل الأفة وتربيامسينولون أسيتونيد لعلاج الحزاز المسطح الفموي التآكلية والضامر) - مجلة العلوم الأمريكية.
- الإشراف العلمي:-
- الاشراف على درجة الماجستير:
- 2012: مشرقاً مشاركاً على رسالة الماجستير للباحثة/ سمر احمد نوبى – بعنوان (تقييم مستوى إنزيم ديسوموتاز الفائق في السائل الحزامي اللثوي لدى المدخنين) تاريخ المنح سبتمبر 2012 – قسم طب الفم وامراض اللثة – كلية طب وجراحة الفم والاسنان – جامعة القاهرة.
- 2013: مشاركاً على رسالة الماجستير للباحثة / داليا شوقي جابر – بعنوان (التأثير المضاد للميكروبات من دوكسيسايكلين هلام الجسيمات النانوية على *Aggregatibacter Actinomycetemcomitans*: في المختبر) تاريخ المنح اغسطس 2013 – قسم طب الفم وامراض اللثة – كلية طب وجراحة الفم والاسنان – جامعة القاهرة.
- 2014: مشاركاً على رسالة الماجستير للباحثة / وسام شهاب بعنوان (التأثير المضاد للبكتيريا لجزيئات الميترونيدازول النانوية على البورفiro ومناس اللثة في المختبر) تاريخ المنح سبتمبر 2014 – قسم طب الفم وامراض اللثة – كلية طب وجراحة الفم والاسنان – جامعة القاهرة.
- 2018: مشاركاً على رسالة الماجستير للباحثة / رانيم مجدى النجار بعنوان (دراسة مقارنة بين الجسيمات النانوية هيدروكسى ابيتيت و الجسيمات النانوية الطينية المحمولة على اغشية الفيبرين الغزى بالصفائح الدموية لعلاج انحسار اللثة من النوع ميلر الاول) – كلية النانو تكنولوجى – جامعة كفر الشيخ.
-

### طلب مسجلين لنيل درجة الدكتوراه:

- 2018: مشرفاً على رسالة الدكتوراه للباحث/ عاطف المختار العجيلي الاصفر - بعنوان (دراسة تشخيصية سرسرية اشعاعية ومناعية نسيجية كيميائية عن تقييم السترونثيوم رانيلات وهيدروكى اباتيت المعدن المعالج كمواد زراعة العظم فى مرضى السكرى المصابين بالتهاب اللثة المزمن) تاريخ التسجيل ديسمبر 2018 - قسم طب الفم وامراض اللثة - كلية طب وجراحة الفم والاسنان - جامعة المنصورة.
- 2019: مشرفاً على رسالة الدكتوراه للباحث/ اسلام حسين انور قنديل - بعنوان (مقارنة بين السترونثيوم رانيلات وهيدروكى اباتيت المعدن كمواد تعويضية فى علاج العيوب العظمية حول الغرس السنى الفورى - دراسة اكلينيكية و تجريبية) تاريخ التسجيل ابريل 2019 - قسم طب الفم وامراض اللثة - كلية طب وجراحة الفم والاسنان - جامعة المنصورة.

### تقديم ابحاث في المؤتمرات:

- 2012: مشاركاً ببحث في مؤتمر جامعة الاسكندرية بعنوان (مقارنة بين البيفسوفنات و السترونثيوم رانيلات على الاندماج العظمى حول زراعة الاسنان - دراسة إكلينيكية عشوائية منضبطة ( 11-9 Stars Meeting ) 2012.
- 2013: مشاركاً ببحث في مؤتمر جامعة القاهرة بعنوان (التأثير العلاجي لاحماض اميغا 3 الدهنية المتعددة الغير مشبعة على جوده الحياة فى مرض التهاب الفم الفلاعى المتكرر غير المستجيب للعلاج الموضعى) المؤتمر الدولى الثالث لطب الاسنان جامعة القاهرة 22-25 يناير 2013.
- 2015: مشاركاً ببحث في مؤتمر دبي لطب الاسنان بعنوان (تأثير التطبيق الموضعى لجسيمات النانو دوكساسيكلين على ماتركس ميتالوا بروتيناز 1 وعلى كثافة العظم فى الالتهاب النسيج حول سنى الشديد) المؤتمر الدولى التاسع عشر لطب الاسنان- دبي 17-19 فبراير 2015.
- 2019: مشاركاً ببحث في مؤتمر نقابة اطباء الغربية الثامن عشر لطب الاسنان - بعنوان (Minimal Invasive Techniques in Periodontal Surgery) - طنطا - نوفمبر 2019.

### المشاركات في لجان الممتحنين:

- المشاركة في امتحان الماجستير في لجنة طب الفم دور نوفمبر 2017 م كلية طب وجراحة الفم والاسنان - جامعة المنصورة .
- المشاركة في امتحان الماجستير في لجنة طرق التشخيص دور نوفمبر 2020 م كلية طب وجراحة الفم والاسنان - جامعة المنصورة .
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- 2018: مناقشة رسالة الماجستير المقدمة من الباحث / احمد نبيل عبد الفتاح الصاوى بعنوان (فاعالية السترونيشوم رانيلات فى تعويض فقدان العظم السنخة - دراسة اكلينيكية وتصوير بالأشعة) تاريخ المناقشة 5-4-2018 قسم طب الفم وأمراض اللثة - كلية طب وجراحة الفم والاسنان - جامعة المنصورة.
- 2018: مناقشة رسالة الماجستير المقدمة من الباحث / ربيعة محمد على دخيل بعنوان (علاج التهاب المزمن باثنان من المطهرات الموزعة موضوعيا بوفيدون- ايودين ضد الهاكسبيتين- دراسة سريرية و ميكروبىولوجية) تاريخ المناقشة 2-5-2018 قسم طب الفم وأمراض اللثة - كلية طب وجراحة الفم والاسنان - جامعة المنصورة.
- 2018 : مناقشة رسالة الماجستير المقدمة من الباحث / شهابى محمد سالم بعنوان (التقييم السريرى والمخترى للأدرينوميديولين كعلامة بيولوجية فى التهاب المزمن المعتمل للأنسجة الداعمة للاسنان) تاريخ المناقشة 5-5-2018

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- 2016: حضور المؤتمر الدولي الثاني لطب الأسنان . كلية الفم وطب الأسنان، جامعة عين شمس و المنعقد بفندق ستايرز القاهرة في 18-21 اكتوبر 2016م.
- 2015: شاركت في المؤتمر الدولي لطب الاسنان بدبي فى 17-19 فبراير 2015
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- 2013: حضور المؤتمر الدولي الثالث لطب الأسنان كلية الفم وطب الأسنان، جامعة القاهرة و المنعقد بفندق ستايرز القاهرة في 22-25 يناير 2013.
- 2012: حضور المؤتمر الدولي لجمعية العلمية لزراعه الاسنان بالاسكندرية (اجتماع النجوم) والمنعقد بفندق هيلتون جرين بلازا – بالاسكندرية – فى 9-11 مايوا 2012.
- 2011: حضور المؤتمر الدولي الخامس عشر لطب الأسنان . كلية الفم وطب الأسنان، جامعة القاهرة و المنعقد بفندق ستايرز القاهرة في 26-28 اكتوبر 2011.
- 2011: حضور المؤتمر الإقليمي طب الاسنان فى وسط الدلتا فندق عرفة- طنطا- الغربية- مصر فى 17-18 نوفمبر 2011.
- 2010: حضور المؤتمر الدولي لطب الأسنان كلية الفم وطب الأسنان، جامعة القاهرة و المنعقد بفندق ستايرز القاهرة في 24-26 يناير 2010.
- 2010: حضور المؤتمر الدولي السابع عشر "AIDC" والمنعقد فى الاسكندرية فى 2-5 نوفمبر 2010 .
- 2010: حضور المؤتمر الإقليمي طب الاسنان فى وسط الدلتا فندق عرفة- طنطا- الغربية- مصر من 9-10 ديسمبر 2010.
- 2009: حضور المؤتمر السادس للكبد والبيئة والمنعقد في قاعة المؤتمرات جامعه طنطا فى 8-9 يناير 2009 .
- 2008: حضور المؤتمر الإقليمي لطب الاسنان فندق عرفة- طنطا- الغربية- مصر في 13-14 نوفمبر 2008.
- 2008: حضور المؤتمر الدولي الاول لطب الاسنان تحت عنوان "Future vision of Dentistry" المنعقد في كلية طب الاسنان جامعه طنطا فى 24-25 ديسمبر 2008.

الدورات التدريبية في المجال الطبي:



- 2009: حصلت على دورة نانو المواد الحيوية والتكنولوجية الذى عقد فى الاسكندرية ،فى الفترة من 13 فبراير الى 16 فبراير 2009 .
- 2009: حصلت على دورة ورشه عمل حول "غرس الاسنان "الذى عقد فى الاسكندرية ( الجمعية المصرية لزراعة الاسنان ) ،فى الفترة من 8 مايو الى 8 يونيو 2009 وحصلت على 120 ساعة فى غرس الاسنان .
- 2010: حصلت على دورة طب الاسنان المبني على الادلة و التي عقدت في جامعة القاهرة ، كلية طب الفم والاسنان فى الفترة من 4-8 ابريل 2010 .
- 2011: حصلت على دورة ورشه عمل حول "غرس الاسنان "الذى عقد فى طنطا ،فى الفترة من 10 ديسمبر 2010 الى 17 مارس 2011 .

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- 1) معايير الجودة فى العملية التدريسية: فى الفترة من 1-3/2 2011 فى "مركز تتميمه قدرات اعضاء هيئة التدريس والقيادات " جامعة طنطا.
- 2) تقويم الطلاب ونظام الامتحانات: خلال شهر ابريل ومايو 2011 (15 ساعة) "مركز ضمان الجودة والاعتماد" جامعة 6 اكتوبر.
- 3) ادارة الوقت والمجتمعات: فى الفترة من 17-19/3 2012 فى "مركز تتميمه قدرات اعضاء هيئة التدريس والقيادات " جامعة طنطا.
- 4) ادارة الفريق البحثى: فى الفترة من 7-9/8 2012 فى "مركز تتميمه قدرات اعضاء هيئة التدريس والقيادات " جامعة طنطا.
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- 7) مهارات التواصل فى انماط التعليم المختلفة: فى 25 / 6 / 2014 "مركز ضمان الجودة والاعتماد" جامعة 6 اكتوبر.
- 8) السلامة والصحة المهنية: فى 22 / 9 / 2014 "مركز ضمان الجودة والاعتماد" جامعة 6 اكتوبر.
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- 11) توصيف البرامج و المقررات وتقويم نواتج التعلم لكليات ومعاهد التعليم العالى: فى الفترة من 21-23 / 8 / 2016 "الهيئة القومية لضمان التعليم والاعتماد"
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- 14) الجوانب المالية والقانونية في الجامعات : فى الفترة من 24-25 / 7 / 2019 "المركز الدولى لادارة الموارد البشرية والتعليم المستمر- جامعة كفر الشيخ"
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 **الانتدابات للتدريس بكليات طب وجراحة الفم الاسنان:**

- 2017/2018: انتدبت لتدريس منهج التشخيص لكليه طب وجراحة الفم والاسنان جامعة كفر الشيخ .
- 2018/2019: انتدبت لتدريس منهج علاج اللثة لكليه طب وجراحة الفم والاسنان جامعة مصر .
- 2018/2019: انتدبت لتدريس منهج علاج اللثة لكليه طب وجراحة الفم والاسنان جامعة مصر .
- 2020/2021: انتدبت لتدريس منهج علاج اللثة لكليه طب وجراحة الفم والاسنان جامعة مصر

 **اللغات:**

العربية – الإنجليزية

 **الكمبيوتر:**

أجيد Advanced Word و Advanced Excel و Advanced Power Point والتعامل مع شبكة الإنترنوت وتصميم المواقع الشخصي وحاصلة على ICDL.

 **روابط الدخول على المواقع الخاصة بي:**

- <https://www.scopus.com/authid/detail.uri?authorId=55885116700>
- [https://scholar.google.com/citations?hl=en&user=mps3\\_aIAAAAJ](https://scholar.google.com/citations?hl=en&user=mps3_aIAAAAJ)
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- <https://www.linkedin.com/in/enas-elgendi-24487968>

<https://www.youtube.com/channel/UCEdNthiMUS782Ytj59kuS3A>

<https://www.facebook.com/enas.elgendi.14>

<https://t.me/ProfDrEnasElgendi>

أ.د. ايناس احمد الجندي

# الأبحاث العلمية

## A Comparative Study between Intralesional Low Molecular Weight Chitosan and Triamcinolone Acetonide for Treatment of Erosive-Atrophic Oral Lichen Planus

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**Abstract:** Oral lichen planus (OLP) is a common chronic inflammatory mucosal disease in which T-cell mediated immune responses are implicated in the pathogenesis. Various treatments have been employed to treat symptomatic OLP, but a complete cure is very difficult to achieve because of its recalcitrant nature. Topical corticosteroids therapy of OLP has shown conflicting results in many reports. This study was conducted on twenty patients with symptomatic OLP were randomly assigned treatment with intralesional 1% low molecular weight chitosan or Triamcinolone Acetonide. The assessments were at weeks 0, 2, 4, 16 by appearance score, pain score, and TNF- $\alpha$  of the target lesions. Obtained results revealed appearance score, pain score, and TNF- $\alpha$ , were reduced in both groups. No significant differences were found between the treatment groups regarding the response rate and relapse. This study aimed to compare the effectiveness of topical intralesional 1% low molecular weight chitosan with topical intralesional Triamcinolone Acetonide in the treatment of oral erosive and atrophic lichen planus and level of TNF- $\alpha$ .

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### 1. Introduction

Oral lichen planus (OLP) is a relatively common chronic autoimmune inflammatory disease of mucosal surface with a variety of clinical manifestations including: reticular, papular, hyperkeratotic, atrophic, erosive, and bullous forms (Edwards & Kelsch, 2002). Among these forms, the long-standing erosive OLP is recalcitrant to medical management and more likely to be malignantly transformed into squamous cell carcinoma. Hence, OLP is considered to be a potentially malignant disorder and attracts many attentions of clinicians (Xiong et al., 2009).

The TNF- $\alpha$  is a small cytokine with a molecular weight of only 17 kDa secreted from inflammatory cells such as activated monocytes, macrophages, and many other cells including B cells, T cells, mast cells, and fibroblasts during infection or trauma. It is a multifunctional cytokine that mediates inflammation, immune response, apoptosis and also has a significant role in normal development and homeostasis of several organs (Thongprasom et al., 2006). TNF has been found to be involved in the pathogenesis of many inflammatory or autoimmune diseases including systemic lupus erythematosus, rheumatoid arthritis, psoriasis and lichen planus (Sugerman et al., 1996).

The best treatment for this case includes the use

of high-potency topical corticosteroids (Setterfield et al., 2000 and Bruce & Rogers, 2007). It has been reported that topical corticosteroids, which have fewer side effects, are equally or even more effective than systemic corticosteroids (Lodi et al., 2005). The long-time use of the topical corticosteroids may also induce drug tolerance or insensitivity to the drugs (Valera et al., 2009), adrenal insufficiency (Levin & Maibach, 2002), pseudomembranous candidiasis (Gonzalez-Garcia et al., 2006), mucocutaneous atrophy (Schoepe et al., 2006), and Cushing's syndrome (Kumar et al., 2004). Moreover, a small proportion of people are allergic to corticosteroids (Foti et al., 2009), while some people are insensitive, or even resistant to corticosteroids, owing to the polymorphisms or mutations in the corticosteroids receptor gene (Charmandari et al., 2008).

Natural products have served as a major source of drugs for centuries, and about half of the pharmaceuticals in use are derived from natural products (Clark, 1996). Among these materials, chitosan (poly-N-acetyl glucosaminoglycan), is a derivative of chitin, which is the second most abundant natural biopolymer, and which is a primary structural component of the exoskeleton of arthropods such as crustaceans, the cell wall of fungi, and the cuticle of insects. Chitosan is obtained by N-acetylation of chitin, and it is biologically renewable,



## ORAL MANIFESTATION OF CONGENITAL INSENSITIVITY TO PAIN CASE REPORT

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### ABSTRACT

**Background:** Pain is a protective mechanism for the body. Absence of pain is a manifestation of several disorders, both congenital and acquired. In the absence of pain, patients are at risk of delayed presentation when subjected to various illnesses or injuries. Children with this condition also suffer oral cavity damage due to biting of their oral soft tissue.

**Aim:** We report a case of congenital insensitivity to pain that presented with self-mutilation injuries to both hands and oral tissues caused by self biting.

**Design:** Case report

**Results:** This case was diagnosed as hereditary sensory and autonomic neuropathies (HSAN) type IV.

**Conclusion:** We have to suspect congenital sensitive to pain in children with self-mutilation injuries to avoid the further complications of this disease.

**KEY WORDS:** insensitivity to pain, oral ulcer, children, neuropathy, Hereditary

### INTRODUCTION

Pain is a protective mechanism for the body. Painful stimuli indicate that tissue damage has happened or about to be happened and this will initiate a withdrawal reflex to avoid or prevent further damage [1]. Collectively termed the hereditary sensory and autonomic neuropathies (HSAN) usually affect the number and distribution of small nerve fibers and it divided now into five subtype (Table 1) [2].

### Case Report

A year-old boy was referred to the oral medicine department at October 6 University for examination. His mother complained of the presence of large ulcers in his tongue and cheek mucosa, she gave a history that the boy has bitten his finger many times and therefore most of his fingers are swollen and injured. There was also a history of consanguinity between his parents. His mother reported that the boy was born as in full term with uncomplicated

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## EFFECT OF LOCAL APPLICATION OF CHITOSAN INSERTS ON SUPEROXIDE DISMUTASE AND ALVEOLAR BONE DENSITY IN CHRONIC PERIODONTITIS: A RANDOMIZED CONTROLLED CLINICAL STUDY

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### ABSTRACT

**Background:** The local application of natural polymers into periodontal pockets has recently gained interest for the possibility of overcoming the limitations of conventional therapy. Amongst various natural polymers, chitosan has attracted great attention in the pharmaceutical and biomedical fields. **Aim:** The aim of the present study is to evaluate the efficacy of locally delivered chitosan as an adjunct to conventional periodontal therapy on selected clinical parameters as well as superoxide dismutase (SOD) activity in patient with chronic periodontitis. **Materials and methods:** Forty patients suffering moderate to sever periodontitis were randomly allocated into two groups: an experimental group receiving scaling and root planing (SRP) plus subgingival application of chitosan inserts; and a control group receiving SRP alone. Monitoring clinical parameters, bone density (BD), as well as superoxide dismutase activity in the gingival crevicular fluid was carried out at baseline, and at 1, 3 and 6 months post treatment. **Results:** By the end of the study period, the combined therapy was able to achieve a greater mean probing pocket depth (PPD) reduction, mean gain in clinical attachment level (CAL) ( $P<0.05$ ), a more rise in BD values ( $P<0.01$ ) as well as greater reduction in SOD activity compared to SRP alone.

**Conclusion:** The findings of the current study suggest that local delivery of chitosan may provide beneficial effects to augment the results following conventional periodontal therapy. Moreover, it places a focus on the value of monitoring gingival crevicular fluid levels of SOD as a marker of periodontal tissue healing.

**KEYWORDS:** Chitosan; Antioxidants; Chronic periodontitis; Superoxide dismutase

### INTRODUCTION

Periodontal disease represents an inflammatory reaction resulting from the interaction between pathogenic bacteria and the host's immune response.

On stimulation by bacterial antigens, polymorph-nuclear leukocytes (PMN) produce reactive oxygen species (ROS) during the process of phagocytosis as part of the host response to infection. Patients with periodontal disease display increased PMN

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## XERODERMA PIGMENTOSA WITH SQUAMOUS CELL CARCINOMA OF THE LIP: A REVIEW OF LITERATURE AND CASE REPORT

Malak Yousef Mohamed Shoukheba\* and Enas Ahmed Elgendi\*\*

### **ABSTRACT**

**Background:** Xeroderma pigmentosa (XP) is a very rare inherited autosomal recessive disease characterized by extreme sensitivity to the sun's ultraviolet rays that causes damages to the genetic material (DNA) in skin cells. As a result, the skin gets very thin with patches of varying color (splotchy pigmentation), premature skin ageing and development of various cutaneous malignancies at an early age. Children with this condition also suffer some oral damage especially in the area exposed to the sun rays.

**Aim:** We reported clinical and histological features of xeroderma pigmentosa patient that presented with squamous cell carcinoma on vermillion border of the lower lip.

**Design:** Review and case report

**Results:** This case describes a case of a 9-year-old girl suffering from xeroderma pigmentosum with advanced squamous cell carcinoma of lower lip. The extensive ultraviolet radiation-induced skin and eye damage are evidence of neglect of sun-protection and lack of appropriate medical care.

**Conclusion:** As soon as the diagnosis of XP is suspected, a patient should be completely protected from ultraviolet rays to avoid the further skin and eye complications of this disease.

**KEY WORDS:** Xeroderma pigmentosa, Squamous cell carcinoma, Skin cancer, Actinic cheilitis, Ultraviolet rays.

### **INTRODUCTION**

Xeroderma pigmentosum ('dry pigmented skin') (XP) is a hereditary autosomal recessive disorder characterized by mucocutaneous and

ocular hypersensitivity to ultraviolet radiation with irreparable DNA damage and subsequent malignant changes; with progressive neurological degeneration in some subjects <sup>(1)</sup>. It is more

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## Histological and Histomorphometric Study of the Effect of Strontium Ranelate on the Healing of One-Wall Intrabony Periodontal Defects in Dogs

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### Abstract

**Background:** Periodontal regeneration aims at the restitution of supporting periodontal tissues lost due to periodontal diseases. With an aim of improving bone regeneration, strontium ranelate and related compounds were developed and have become increasingly popular in osteoporosis treatment. The aim of the present study was to evaluate the effect of the strontium ranelate 2% gel on the regeneration of the surgically created intrabony defect in dogs.

**Methods:** One-wall intrabony defects (4 × 6 mm) were surgically created in the mesial aspect of second premolars bilaterally (split mouth study) in 10 dogs. Each intrabony defect underwent one of 2 treatment modalities: placebo gel (methyl cellulose gel)/collagen sponge (*control site, group I*) or strontium ranelate gel/collagen sponge (*experimental site, group II*). The animals were sacrificed with an overdose of anesthesia at 3 months and block sections of the defects were collected for histological and histometric analysis.

**Results:** Clinical healing progressed uneventfully in general, no visible adverse reactions. Strontium treated group (*group II*) demonstrated a significantly higher regeneration of the attachment apparatus in the form of newly formed bone, cementum and little amount of connective tissue adhesion ( $3.89 \pm 0.09$ ,  $3.42 \pm 0.75$ ,  $0.27 \pm 0.02$  respectively) than the control group ( $1.17 \pm 0.63$ ,  $1.75 \pm 0.07$ ,  $1.26 \pm 0.05$  respectively) ( $P < 0.001$ ). There was also significant differences between the two treatment modalities in the amount of epithelial down growth where control treated group show significant amount of epithelial down growth ( $P < 0.01$ ).

**Conclusion:** It was concluded that, strontium ranelate 2% gel appears to be safe and may support periodontal wound healing/regeneration in intrabony periodontal defects without complications.

**Keywords:** Periodontal regeneration; Intrabony defect; Strontium ranelate

### Introduction

The ultimate goal of periodontal therapy is not only the removal of the etiologic factors but also the regeneration of destroyed periodontal tissue [1]. Therapeutic approaches involve various modalities to arrest progression of periodontal tissue destruction, as well as regenerative techniques intended to restore structures destroyed during the disease process [2].

Strontium ranelate (SrRan) and related compounds have become increasingly popular in preventing and treating osteoporosis [3]. In vitro studies revealed that SrRan has an anabolic and antiresorptive activity, which increase both the collagen and non-collagen protein synthesis [4,5], enhance pre-osteoblast differentiation [6,7], inhibit osteoclast differentiation, and function [8,9].

In normal adult mice, SrRan (200–1800 mg/kg/day, 104 weeks) administration increased vertebral bone formation and decreased bone resorption, which resulted in increased bone mass [10]. The administration of SrRan in normal rats (225–900 mg/kg/day, i.e., 0.88 to 3.51 mmol Sr/kg/day, 104 weeks) increased trabecular thickness and number and decreased trabecular separation in the tibial metaphysis, indicating that SrRan increased bone formation and decreased bone resorption at the metaphyseal bone level. This positive effect of SrRan on bone mass is associated with increased, plasma alkaline phosphatase activity, which is compatible with a bone-forming activity of SrRan [11].

Additionally, SrRan exerts beneficial effects on bone mass and strength as observed by Buehler et al. [12] in normal adult monkeys

(*Macaca fascicularis*) where SrRan (0.39–2.91 mmol Sr/kg/day, 6 months) was found to decrease bone resorption in the alveolar bone, an active site of bone remodeling, as assessed by histomorphometric analysis of osteoclast surface and number.

The purpose of this study was to evaluate the regenerative potential of SrRan on the treatment of one wall-intrabony defect in dogs.

### Materials and Methods

#### Animal selection

A total of 10 adult male mongrel dogs weighing from 20–25 kg were selected from Physiology Department, Faculty of Medicine, Tanta University to be used in this study. The animal had intact dentition with healthy periodontium. The animals were fed a soft diet throughout the study to reduce the chance of mechanical interference with healing during food intake.

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## COVERAGE OF GINGIVAL RECESSION DEFECTS USING CHITOSAN MEMBRANE WITH AND WITHOUT ADJUNCTIVE BONE MORPHOGENETIC-2 PROTEIN IN DOG

Amel Mohamed Ezzat\*; Enas Ahmed Elgendi\*\* and Amr Helmy Elbolok\*\*\*

### ABSTRACT

**Background:** Gingival recession has presented a therapeutic challenge. Coronally advanced flap (CAF) which is one of the most effective treatments. Chitosan is natural polymers, biocompatible and has anti-inflammatory effects. BMP has been used to promote bone and periodontal regeneration. The present study evaluates the uses of chitosan membrane with or without Bone morphogenic protein (BMP) in the buccal gingival recession. **Materials and Methods:** Ten adult male mongrel dogs weighting 20-25 kg were used. Buccal gingival recession defects were surgically created in canine region. After 4 weeks, the defects were assigned to two groups. Group A: treated with chitosan membrane and Group B: treated with chitosan membrane + BMP. After two month, the spicements were processed for histological examination. The cellular proliferation was measured using immunostain. **Results:** Results revealed marked healing progress in chitosan with BMP than the other group. **Conclusion:** We concluded that combined treatment with chitosan membrane with BMP is more efficient.

**KEY WORDS:** Chitosan, BMP, Immunostain, Ki67.

### INTRODUCTION

Gingival recession is defined as the displacement of the marginal tissue apical to the cementoenamel junction. Histologically, the destruction of gingival tissues, due to mechanical forces or inflammatory periodontal disease, is associated with loss of periodontal connective tissue fibers and alveolar bone. As a consequence, exposure of the root surface to oral environment will occur<sup>(1)</sup>.

Gingival recession and root exposure have

presented a therapeutic challenge to clinicians for many years. Many techniques have been introduced to treat gingival recession, including autogenous free connective tissue grafts (CTG), coronally positioned flaps, orthodontics, pedicle grafts, free gingival grafts and guided tissue regeneration (GTR)<sup>(2)</sup>.

Coronally advanced flap (CAF) is one of the most effective treatments of Miller Class I and II recession defects. The mean percentage of root coverage obtained with this technique ranges from

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## Original Article

# Effect of local application of tea tree (*Melaleuca alternifolia*) oil gel on long pentraxin level used as an adjunctive treatment of chronic periodontitis: A randomized controlled clinical study

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**Abstract:**

**Background:** Conventional non-surgical periodontal therapy has been proven to be an effective treatment for patients with chronic periodontitis. Tea tree oil (TTO) can be used as adjunct to conventional periodontal therapy in patient with chronic periodontitis. The aim of this study was to evaluate the effectiveness of adjunctive treatment of TTO on the clinical parameters and the level of pentraxin-3 (PTX3) in chronic periodontitis. **Materials and Methods:** A total of 40 patients with moderate to severe chronic periodontitis were divided into two groups, Group I received scaling and root planing (SRP) only, Group II received SRP and TTO gel. Clinical parameters were recorded and gingival crevicular fluid (GCF) samples were collected from each subject for measuring PTX3 levels at baseline, 1, 3 and 6 months after treatment. **Results:** In all evaluation periods, there was statistically significant reduction in each of the studied clinical parameters and PTX3 level in Group II as compared with Group I. **Conclusions:** The local delivery of TTO gel in case of chronic periodontitis may have some beneficial effects to augment the results of the conventional periodontal therapy. Moreover, it places a focus on the value of monitoring GCF levels of PTX3 as a marker of periodontal tissue healing.

**Key words:**

Chronic periodontitis, pentraxin-3, tea tree oil



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**INTRODUCTION**

Periodontitis, a local chronic inflammation in the supporting tissues of the teeth leading to progressive loss of the periodontal ligament and bone, is believed to result from disruption of the homeostatic balance between periodontopathic bacteria and the host response to these microorganisms.<sup>[1]</sup>

The critical objectives of periodontal therapy include stopping the disease progression and resolving the inflammation.<sup>[2]</sup> Mechanical debridement has been the most widely used approach, but many studies have shown that mechanical debridement alone cannot effectively eliminate most of the causative bacteria and it is usually associated with high recurrence rate.<sup>[3,4]</sup>

Several systemic antibiotics have been used for periodontal treatment to suppress or eliminate residual periodontal pathogens and thus serve as an adjunct to the conventional mechanical therapy.<sup>[5]</sup> Unwanted side effects such as resistance, toxicity, sensitivity, growth of

opportunistic infection and interaction with other medications are often encountered.<sup>[6]</sup> Therefore, the local administration of antimicrobials can provide a useful solution to those complications.<sup>[6]</sup>

Local drug delivery results in a high concentration of the administrated drug in the pocket, which can penetrate into the periodontal tissues as well. This dual effect on pocket microflora as well as on pathogens invading the tissue can result in enhanced clinical results without any systemic side effects and bacterial resistance. In addition, it provides 100-fold higher therapeutic doses of the agent in subgingival areas than systemic therapy.<sup>[7,8]</sup>

Natural products have served as a major source of drugs for centuries and about half of pharmaceuticals in use today are derived from natural products.<sup>[9]</sup> Oriental medicines have been evaluated for their effects on periodontal disease, regarding the antibacterial and anti-inflammatory effects as well as the periodontal tissue regeneration.<sup>[10]</sup> Among these materials, tea tree oil (TTO) is derived from the paper bark tea tree.<sup>[11]</sup> TTO has a broad-spectrum antimicrobial,

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## Re-implantation of hopeless tooth due to periodontal disease by using implant surgical drilling: Case report study

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### Abstract

**Aim and methodology:** This article presents an intentional replantation of a periodontally involved hopeless incisor tooth with one year of results. This involves the purposeful removal of the tooth and its reinsertion into the socket after proper endodontic manipulation and repair.

**Results:** A hopeless periodontally involved central incisor was replanted after root canal treatment and tetracycline-HCl conditioning using implant surgical drilling technique and supplemented with bone graft material and kept under observation for one year. It was seen that the tooth was asymptomatic and still in function with no radiographic signs of pathosis. Periodontal health was in normal limits with no bleeding on probing and no pathological pocket formation. Reasonable amount of alveolar bone support was observed. The results obtained may indicate that intentional replantation is a viable mode of treatment in certain situations to preserve the natural dentition.

**Conclusion:** Intentional tooth reimplantation can be an alternative treatment option for periodontally involved teeth with poor or hopeless prognosis.

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**Keywords:** Replantation; Periodontal diseases/treatment; Treatment outcome

### 1. Introduction

Treatment of a single hopeless tooth is a routine challenge in dentistry [1]. Intentional replantation is an accepted procedure in which a tooth is extracted and

treated outside the oral cavity, then reinserted into its socket [2,3]. It is a treatment option when more conventional forms of treatment either fail or are impossible [4]. It has been used in the treatment of vertical fractures [5], endodontic-periodontic lesions [6], periodontally involved teeth with a hopeless prognosis and certain anatomical malformations, such as radicular groove [1,7].

Although intentional replantation is contraindicated in the presence of periodontal disease in which there is marked tooth mobility, furcation involvement or gingival inflammation [8], there are some studies with successful results with periodontally involved teeth [9,1].

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## EFFECT OF DIABETES ON SERUM AND GINGIVAL CREVICULAR FLUID (GCF) LEVELS OF LONG PENTRAXINS (PTX3) IN PATIENTS WITH CHRONIC PERIODONTITIS

Naglaa El-Wakeel\* and Enas El-Gendy\*\*

### ABSTRACT

The investigated hypothesis was that levels of pentraxin 3 would increase in serum and GCF of chronic periodontitis patients complicated with diabetes mellitus.

**Subjects and methods:** The study included 40 subjects divided into 4 groups. Group 1 (10 chronic periodontitis patients with type I diabetes), group 2 (10 chronic periodontitis with type 2 diabetes), group 3 (10 chronic periodontitis patients) and group 4 (10 healthy controls). Serum and GCF levels of PTX3 were estimated using an enzyme-linked immunosorbent assay (ELISA).

**Results:** In serum and GCF; group 1 showed the highest mean statistically significant level, followed by diabetes Type 2 group. Non-diabetics with chronic periodontitis showed significantly lower mean level. Normal subjects showed the statistically significantly lowest mean Pentraxin 3 levels. A mean serum level of PTX3 was higher than GCF.

**Conclusions:** Within limitations of the present study, PTX3 levels in serum and GCF of chronic periodontitis patients is increased by the effect of diabetes.

**KEY WORDS:** Chronic periodontitis; Diabetes Mellitus; Gingival crevicular fluid; Pentraxin 3; Plasma.

### INTRODUCTION

Periodontal diseases are a site specific chronic inflammatory infectious diseases caused mainly by bacteria in dental plaque that elicit host immune response resulting in destruction of periodontium. Genetic and environmental factors are also incorporated in pathogenesis of periodontitis.<sup>(1,2)</sup> Mediators produced as part of the host response that contributes to tissue destruction include acute-phase

proteins (APP), and cytokines.<sup>(3)</sup> As a result, levels of various AP proteins has been elevated in gingival crevicular fluid (GCF) and in plasma or serum.<sup>(4,5)</sup> It also appears that access of bacteria associated with periodontitis to the circulation results in systemic manifestations.<sup>(6)</sup>

Diabetes mellitus (DM) is a chronic metabolic disorder characterized by altered glucose tolerance or impaired carbohydrate, protein and lipid

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## Efficacy of omega-3 in treatment of recurrent aphthous stomatitis and improvement of quality of life: a randomized, double-blind, placebo-controlled study

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**Objective.** This study assessed the effects of systemic omega-3 on the treatment of recurrent aphthous stomatitis and on the improvement of quality of life.

**Study Design.** Fifty participants were randomly assigned to receive either omega-3 (1 g, 3 times daily) or placebo for 6 months. Assessment of outcome measures including monthly number of new ulcers, average duration of ulcer episodes, and pain level of ulcers was carried out at baseline and monthly for 6 months. Analysis of potential impact on quality of life using the Oral Health Impact Profile 14 was carried out at baseline and 6 months.

**Results.** Daily omega-3 treatment achieved a significant reduction in number of ulcers, duration of ulcers, and level of pain by 3 months that persisted for 6 months. Mean score on Oral Health Impact Profile 14 also significantly improved by 6 months.

**Conclusions.** A daily omega-3 regimen shows promise as therapy for treatment and management of patients with recurrent aphthous stomatitis. (Oral Surg Oral Med Oral Pathol Oral Radiol 2014;117:191-196)

Recurrent aphthous stomatitis (RAS) is a multifactorial chronic inflammatory disorder that may be classified into 3 clinical variants (minor, major, and herpetiform), of which the most common by far is minor aphthous ulceration.<sup>1</sup> Several studies have demonstrated the role of immunologic factors, stress, trauma, cessation of smoking, and luteal phase of the menstrual cycle in the etiopathogenesis of RAS.<sup>2</sup> The goals of current therapeutic approaches include the management of pain and functional impairment, as well as reducing the duration and frequency of recurrences. To achieve these goals, several medicaments for topical use have been used, including chlorhexidine, hyaluronic acid, and amlexanox, with different and not always reproducible results.<sup>3-5</sup> In RAS patients who do not respond to topical therapy, the use of systemic medications should be considered, including corticosteroids, levamisole, or colchicine.<sup>6,7</sup> However, the therapeutic value of current systemic therapies with respect to the development of adverse effects remains unproven, and the search for effective and well-tolerated systemic agents to enhance treatment options for clinicians continues.

Recent studies have investigated the beneficial effects of fish oils as rich dietary sources of the omega-3 polyunsaturated fatty acids eicosapentaenoic acid (EPA) (20:5ω3) and docosahexaenoic acid (DHA) (22:6ω3)

on chronic inflammatory diseases including rheumatoid arthritis, systemic lupus erythematosus, inflammatory bowel diseases, and chronic periodontitis.<sup>8-11</sup> Although several studies have suggested that dietary supplementation with a dose of about 1.5 g/d of EPA/DHA is sufficient to control inflammatory processes, others have recommended higher doses (e.g., 3.5 g/d).<sup>12</sup>

Recurrent oral mucosal lesions including RAS can cause a wide range of clinical signs and symptoms, some of which can have a considerable effect on quality of life.<sup>13</sup> However, studies investigating this effect are still lacking. This study was initiated to evaluate the potential of dietary supplementation of omega-3 polyunsaturated fatty acids for providing an inexpensive, safe, and effective therapeutic agent for managing RAS.

### MATERIALS AND METHODS

#### Subjects and study design

This parallel-design, double-blind, placebo-controlled study was conducted on 50 participants divided randomly into a control group (placebo group) that included 25 participants (10 males and 15 females) who received placebo soft gelatin capsules and an

### Statement of Clinical Relevance

Findings from this double-blind, randomized, placebo-controlled study of 50 participants supported the potential of omega-3 polyunsaturated fatty acids for providing a safe, inexpensive, and effective therapy for recurrent aphthous stomatitis and improving the quality of life in affected patients.

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## Evaluation of Chitosan Membrane with or without Autologous Platelet Rich Plasma in the Treatment of Gingival Recession: Histological Study in dogs

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### Abstract

Coverage of roots exposed by gingival recession is one of the main objectives of periodontal reconstructive surgery. Connective tissue graft (CTG) is preferred for treating most mucogingival recession defects and could be considered the gold standard. Chitosan is known to be natural polymers and it is available, biodegradable, biocompatible, and non-toxic and has antimicrobial and anti-inflammatory effects. Platelet rich plasma (PRP) is an autologous source of platelet derived growth factor and transforming growth factor beta that play a role in periodontal regeneration. The present study was designed to evaluate and compare chitosan membrane with or without PRP versus CTG in the treatment of Miller Class I buccal gingival recession  $\geq 4$  mm in width in dogs histologically. Miller Class I buccal gingival recession defects were surgically created in upper and lower canine of dogs. After 4 weeks, the defects were randomly assigned to one of the three treatment modalities, connective tissue graft + coronally advanced flap, chitosan membrane + coronally advanced flap or chitosan membrane + autologous platelet-rich plasma + coronally advanced flap. The animals were sacrificed using an overdose of anesthesia for histological examinations according to the following order: Two dogs were sacrificed at one month post-surgically and two dogs were sacrificed at two month post-surgically. The blocks were processed routinely in a way to obtain a panoramic view of the recession area for histological examination. Histological evaluation of the CTG revealed connective tissue fibers which were parallel to the root surface, and no histological evidence of new cementum, bone or periodontal ligament. On the other hand, histological evaluation of the chitosan membrane or chitosan membrane with PRP revealed new cementum, new bone formation, dense well organized highly cellular periodontal ligament fibers oriented perpendicular to the tooth surface and no migration of junctional epithelium. While CTG is the "gold standard" for root coverage in teeth with gingival recession the histological results of the present study revealed that CTG repaired by connective tissue. In contrast, the CAF with chitosan membrane with or without PRP was found to have all tissues necessary for regeneration, new cementum, well organized periodontal ligament fibers and new bone formation.

**Key Words:** Gingival recession, Connective tissue graft, Chitosan, Platelet rich plasma

### Introduction

Gingival recession is defined as the displacement of the marginal tissue apical to the cementoenamel junction. Histologically, the destruction of gingival tissues, due to mechanical forces or inflammatory periodontal disease, is associated with loss of periodontal connective tissue fibers

and alveolar bone. As a consequence, exposure of the root surface to oral environment will occur (1). Gingival recession and root exposure have presented a therapeutic challenge to clinicians for many years. Patients often complain about poor esthetics and root sensitivity. Later on, the long-lasting recessions will be complicated by root

## Evaluation of Chitosan Membrane with or without Autologous Platelet Rich Plasma in the Treatment of Gingival Recession: A Randomized Controlled Clinical Study

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### Abstract

Chitosan is known to be natural polymers and it is available, biodegradable, biocompatible, and non-toxic and has antimicrobial and anti-inflammatory effects. Platelet rich plasma (PRP) is an autologous source of platelet derived growth factor and transforming growth factor beta that play a role in periodontal regeneration. The present study was designed to evaluate and compare chitosan membrane with or without PRP versus CTG in the treatment of Miller Class I buccal gingival recession  $\geq 4$  mm in width. Thirty sites in patients with Miller Class I buccal gingival recession  $\geq 4$  mm in width were included in this study. The patients were classified randomly into three treatment groups, ten sites for each group. Selected recession sites were treated with one of the following three modalities. Group I: connective tissue graft in addition coronally advanced flap. Group II: chitosan membrane in addition coronally advanced flap. Group III: chitosan membrane, autologous platelet-rich plasma in addition coronally advanced flap. Plaque index (PI), gingival index (GI), probing pocket depth (PPD), clinical attachment level (CAL), recession height (RH), recession width (RW), digital measurements of area of recession and height of the keratinized tissue (HKT) were recorded at baseline and at 1, 3, 6 and 12 months post surgically, except for PPD & CAL which were assessed at 6 and 12 months post surgically. Gingival thickness (GT) was recorded at baseline and after 12 months post surgically. Percentage of root coverage (RC) was recorded at 1, 3, 6, 12 months and wound healing index (WHI) was recorded at 2 weeks, 1, 3, and 6 months after surgery. All groups showed comparable results at the end of the study period. The three treatment modalities showed a statistically significant reduction in CAL at 6 and 12 months as compared to the mean baseline value. Intergroup comparison showed that group III had significantly less RH, RW, and digital measurement of recession area as compared to group I at one month, while there was statistically insignificant difference between group II and I. On the other hand, the results at 3, 6 and 12 months post-surgery were comparable and statistically insignificant. Difference in all treated groups there was a statistically significant increase in the mean HKT up to 12 months as compared to the mean baseline value. However, CTG lead to more HKT as compared to groups II & III. There was a statistically significant increase in the mean GT after 12 months post-surgery in all treated groups. The mean GT was more significantly increased in group I & III as compared to group II. A statistically significant reduction in WHI in chitosan membrane and chitosan membrane and PRP groups when compared to the CTG group at 2 weeks post-operatively. Clinical results of the present study indicated that, the addition of chitosan membrane with or without PRP to CAF resulted in root coverage comparable to CTG but without the discomfort as in the second surgical procedure and the potential clinical difficulties associated with the donor site surgery. Clinically the addition of PRP to chitosan resulted in an increase gingival thickness as compared to chitosan membrane alone. Gingival thickness in group III (chitosan with PRP) was comparable to CTG.

**Key Words:** Gingival recession, Connective tissue graft, Chitosan, Platelet rich plasma

### Introduction

Gingival recession is defined as the displacement of the marginal tissue apical to the cement enamel junction. Histologically, the

destruction of gingival tissues, due to mechanical forces or inflammatory periodontal disease, is associated with loss of periodontal connective tissue fibers and alveolar bone. As a consequence,

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## ASSESSMENT OF SUPEROXIDE DISMUTASE ENZYME LEVEL IN GINGIVAL CREVICULAR FLUID IN SMOKERS

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### ABSTRACT

**Background:** Smoking, which is an important risk factor for periodontitis, induces oxidative stress in the body and causes an imbalance between reactive oxygen species (ROS) and antioxidants, such as superoxide dismutase (SOD). In the present study, we set out to assess periodontal disease in smoking and non-smoking subjects evaluated by estimating the level of SOD enzyme.

**Methods:** Fifty patients in the age range of 30 to 50 years were selected. Clinical parameters recorded were plaque index (PI), papillary bleeding index (PBI), probing pocket depth (PPD), and clinical attachment loss (CAL). The patients were classified into five groups each group included 10 patient, based on smoking status (non-smokers healthy patients, light smokers with chronic gingivitis, heavy smokers with chronic gingivitis, light smokers with chronic periodontitis, heavy smokers with chronic periodontitis). Gingival crevicular fluid (GCF) samples were collected to analyze the level of SOD levels.

**Results:** The mean levels of SOD in the GCF of smokers were decreased compared to controls. Intra- and intergroup analyses showed a significant reduction in the levels of SOD in the GCF of heavy smokers compared to light smokers and the control group. There was a correlation between SOD and PPD and CAL in smokers with periodontitis.

**Conclusions:** SOD levels in GCF are reduced in smokers in particular heavy smokers. The benefits of reduced smoking and improved antioxidant levels may motivate smoking cessation.

**KEY WORDS:** Smoking, periodontal disease, clinical parameters, superoxide dismutase (SOD).

### INTRODUCTION

Periodontal disease is the result of an inflammatory response resulting from interaction between pathogenic bacteria and the host's immune

response. The antimicrobial activities of monocytes and polymorphnuclear leukocytes (PMNLS) have been broadly characterized as being either oxygen-dependant or oxygen-independent system<sup>(1)</sup>.

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## Original Article

# Clinical and radiographic evaluation of nanocrystalline hydroxyapatite with or without platelet-rich fibrin membrane in the treatment of periodontal intrabony defects

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## Abstract:

**Background:** Nano-sized ceramics may represent a promising class of bone graft substitutes due to their improved osseointegrative properties. Nanocrystalline hydroxyapatite (NcHA) binds to bone and stimulate bone healing by stimulation of osteoblast activity. Platelet-rich fibrin (PRF), an intimate assembly of cytokines, glycan chains, and structural glycoproteins enmeshed within a slowly polymerized fibrin network, has the potential to accelerate soft and hard tissue healing. The present study aims to explore the clinical and radiographical outcome of NcHA bone graft with or without PRF, in the treatment of intrabony periodontal defects. **Materials and Methods:** In a split-mouth study design, 20 patients having two almost identical intrabony defects with clinical probing depth of at least 6 mm were selected for the study. Selected sites were randomly divided into two groups. In Group I, mucoperiosteal flap elevation followed by the placement of NcHA was done. In Group II, mucoperiosteal flap elevation, followed by the placement of NcHA with PRF was done. Clinical and radiographic parameters were recorded at baseline and at 6-month postoperatively. **Results:** Both treatment groups showed a significant probing pocket depth (PPD) reduction, clinical attachment gain, increase bone density 6-month after surgery compared with baseline. However, there was a significantly greater PPD reduction and clinical attachment gain when PRF was added to NcHA. **Conclusion:** The NcHA bone graft in combination with PRF demonstrated clinical advantages beyond that achieved by the NcHA alone.

## Key words:

Nanocrystalline hydroxyapatite, periodontal regeneration, platelet-rich fibrin

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## INTRODUCTION

The ultimate goal of periodontal therapy is the regeneration of periodontal tissues that have been destroyed due to periodontal disease. Periodontal regeneration is the reconstruction of the lost tissues as evidenced histologically in the formation of new cementum, new alveolar bone, and functionally oriented periodontal ligament. Different modalities have been proposed to obtain regeneration of periodontal tissues employing various bone grafts, bone substitute materials, guided tissue regeneration (GTR), combination of bone grafts or bone substitutes with GTR and growth factors.<sup>[1-6]</sup>

Hydroxyapatites (HAs) represent a family of bone grafting materials with a high degree of biocompatibility that is largely attributable to its presence in natural calcified tissue.<sup>[7]</sup> Preliminary experimental studies have shown that nano-sized ceramics may represent a promising class of bone graft substitutes due to their improved osseointegrative properties.<sup>[8,9]</sup> Accordingly, a synthetic nanocrystalline hydroxyapatite

(NcHA) bone graft has been introduced for augmentation procedures in intrabony defects. Advantages of NcHA material are osteoconductivity, bioresorbability, and close contact. A special feature of nanostructured materials is an extremely high number of molecules on the surface of the material. When the NcHA was used as a bone graft substitute, rapid healing of critical size defects was observed in animal experiments and in human applications.<sup>[10]</sup> NcHA binds to bone and stimulate bone healing by stimulation of osteoblast activity.<sup>[11]</sup> NcHA has been used for the treatment of metaphyseal fractures in orthopedic surgery,<sup>[12]</sup> ridge augmentation,<sup>[13]</sup> and peri-implantitis lesions.<sup>[14]</sup>

Platelet-rich plasma (PRP) is an autologous concentration of platelets in plasma.<sup>[15,16]</sup> PRP has been used to enhance the clinical outcome obtained by using bone grafts with and without GTR in the treatment of intrabony defects. PRF, a second-generation platelet concentrate has been introduced by Choukroun *et al.* in 2001 that has several advantages over PRP.<sup>[17]</sup>

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## ASSESSMENT OF CHANGES IN CLINICAL, BIOCHEMICAL AND RADIODENSITOMETRIC MARKERS IN EGYPTIAN MALE SMOKERS WITH CHRONIC PERIODONTITIS

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### ABSTRACT

**Background:** Periodontitis is a chronic inflammatory condition of the tissues that surround and support the teeth. Cigarette smoking is a major risk factor in periodontal diseases.

**Objectives:** The aim of this study was to investigate the influence of cigarette smoking on clinical, digital radiodensitometric and biochemical markers in chronic periodontitis patients.

**Methods:** The study base consisted of 102 male subjects. 43 of them were smokers with chronic periodontitis and 37 non-smoker subjects with chronic periodontitis and 22 healthy non-smoker control male volunteers. The clinical parameters, bone density, biochemical markers were measured.

**Results:** In smokers, plaque index (PI), probing pocket Depth (PPD) and clinical attachment level (CAL) were significantly higher, and gingival index (GI) and bone density (BD) were significantly lower compared to non-smokers with periodontitis ( $P < 0.05$ ). The mean values of all biochemical markers measured in saliva were different in smokers than non-smoker with chronic periodontitis group.

**Conclusions:** Cigarette smoking showed significantly higher periodontal clinical and radiodensitometric markers and a higher systemic oxidative stress.

**KEYWORDS:** Chronic periodontitis, Oxidative stress, Digital radiodensitometry, Smoking, salivary biochemical markers.

### INTRODUCTION

Chronic periodontitis is an inflammatory disease that affects the supporting tissues of the teeth. It may lead to the development of a high systemic disease burden and possibly affect general

health <sup>(1)</sup>, however, the manifestation and progression of periodontitis is influenced by a wide variety of determinants and factors including subject characteristics, social and behavioural factors, systemic factors, genetic factors, tooth level

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## Coenzyme Q10 as a dietary supplement combined with topical corticosteroids in the treatment of erosive lesions of oral lichen planus

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### Introduction

Oral lichen planus (OLP) is a chronic mucocutaneous disease with an immunological etiology. This study was conducted to evaluate the effect of coenzyme Q10 (CoQ10) as an adjunctive to topical corticosteroids in the treatment of erosive-ulcerative lichen planus.

### Materials and methods

A total of 30 patients with a confirmed clinical diagnosis of OLP participated in this clinical trial. Patients were randomly allocated into one of two groups and treated as follows: group I received topical corticosteroids and group II received CoQ10 combined with topical corticosteroids. Assessment of outcome measures including clinical score and pain was carried out at the time of initial visit (baseline) and at 2, 4, 8, and 12 weeks following treatment protocol. All recorded data were analyzed using paired *t*-test and independent *t*-test. The level of significance was established at a *P* value of 0.05 or less.

### Results

The two studied groups showed a marked reduction in pain sensation and size of lesions, particularly in the final follow-up period. However, healing and decrease in the size of the lesions were effective in group II, and a significant difference was found between the two groups favoring group II over group I.

### Conclusion

CoQ10 in combination with topical corticosteroids was found to be effective in managing ulcerative lesions of OLP; however, more studies with a larger sample sizes and longer duration with evaluation of the adjunctive effect of CoQ10 on inflammatory markers expressed in OLP are recommended.

### Keywords:

antioxidant; coenzyme Q10, cortisone, erosive oral lichen planus

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### Introduction

Oral lichen planus (OLP) is a relatively common chronic mucocutaneous autoimmune inflammatory disease of the mucosal surface with a variety of clinical manifestations including reticular, papular, hyperkeratotic, atrophic, erosive, and bullous forms [1]. The exact etiology of OLP is still unknown, but it is mostly considered as a multifactorial process with different triggers such as genetic susceptibility, immunological illnesses, malnutrition, and psychological as well as infectious factors [2,3].

In addition, the level of reactive oxygen species (ROS) and lipid peroxidation may be related to OLP [4]. Any certain condition that leads to increased levels of ROS (either by overproduction or impaired removal) or reduced function of antioxidants is called oxidative stress. ROS may be toxic to cells via inactive enzymes, denaturizing proteins, DNA destruction, and lipid peroxidation. These events lead to damaged cell membrane, increased reactive aldehyde materials, and impaired cell function [5]. This suggests that oxidative

stress is a major trigger for OLP, and the level of antioxidants is a potential determinant of susceptibility to be affected by OLP [6,7].

A variety of treatments have been proposed for OLP: topical or systemic corticosteroids, cyclosporine, retinoids, azathioprine, tacrolimus, pimecrolimus, photochemotherapy, and surgery [8,9]. Systemic and topical corticosteroids are probably the most effective treatment modality for patients with diffuse erosive OLP or multisite disease [10]. Despite the therapeutic effects of corticosteroids, they have significant morbidity and disturbing adverse effects such as fungal infections and adrenal suppression. Moreover, steroid use is contraindicated in patients who are breastfeeding, and have to be used with caution in patients with herpetic infections, glaucoma, HIV infection, tuberculosis,

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## EFFECT OF OZONE GEL ON ALVEOLAR BONE DENSITY AND SUPEROXIDE DISMUTASE IN CHRONIC PERIODONTITIS: A RANDOMIZED CONTROLLED CLINICAL STUDY

Enas A. Elgendi\* and Soheir E. Elkholey\*\*

### ABSTRACT

**Aim:** The aim of the present study was to evaluate the efficacy of locally delivered ozone gel as an adjunct to conventional periodontal therapy on selected clinical parameters as well as alveolar bone density (BD) and superoxide dismutase (SOD) activity in patient with chronic periodontitis.

**Materials and Methods:** Forty sites with attachment loss  $\geq 5\text{mm}$ . were randomly allocated into two groups: group I: a control group receiving scaling and root planing (SRP) plus subgingival application of placebo gel, group II: an experimental group receiving SRP plus subgingival application of ozone gel. Clinical parameters as well as superoxid dismutase activity at baseline, and at 1, 3 and 6 months post treatment and bone density at baseline, 3 and 6 months post treatment were monitored.

**Results:** By the end of the study period, the ozone treated group was able to achieve a greater mean probing pocket depth reduction, mean gain in clinical attachment level, a more rise in BD values ( $P<0.001$ ) as well as greater reduction in SOD activity ( $P<0.01$ ) compared to SRP alone.

**Conclusion:** The findings of the current study suggest that local delivery of ozone gel may provide beneficial effects to augment the results following conventional periodontal therapy.

**KEYWORDS:** Ozone gel; Antioxidants; Chronic periodontitis; Superoxid dismutase

### INTRODUCTION

Periodontal disease represents an inflammatory reaction resulting from the interaction between pathogenic bacteria and the host's immune response. On stimulation by bacterial antigens, polymorph

nuclear leukocytes (PMN) produce reactive oxygen species (ROS) during the process of phagocytosis as part of the host response to infection. Patients with periodontal disease display increased PMN number and activity. It has been suggested that this proliferation results in a high degree of ROS release,

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## COMPARISON BETWEEN LOCAL APPLICATION OF DOXYCYCLINE LOADED NANOPARTICLES AND CONVENTIONAL DOXYCYCLINE GEL ON MATRIX METALLOPROTEINASE 1 AND BONE DENSITY IN CHRONIC PERIODONTITIS

Enas Ahmed Elgendi\*

### **ABSTRACT**

**Background & Objective:** Nanoparticles have received considerable attention in recent years. This study was conducted to compare between doxycycline loaded nanoparticles (DLNs) and conventional doxycycline gel (CDG) in management of chronic periodontitis (CP).

**Materials and Methods:** This randomized, split mouth study was conducted on 40 sites among 20 patients with chronic periodontitis. The sites were randomly allocated into a control group, receiving scaling and root planing (SRP) plus CDG, and an experimental group, receiving SRP plus DLNs. Clinical parameters and levels of matrix metalloproteinase 1 (MMP1) were assessed at baseline, 1, 3 and 6 months post treatment. Bone density was also assessed at baseline and 6 months after treatment.

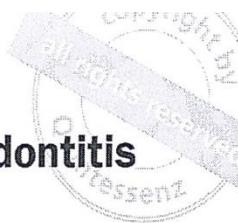
**Results:** The results, following the use of both treatment gel formulas, showed a statistically significant reduction in all tested clinical parameters and levels of MMP1 at 1, 3 and 6 months post treatment along with significant increase in bone density after 6 months. However, DLNs treatment achieved a significant reduction not only in clinical parameters but also in MMP1 as compared to CDG treated group. In addition, The DLNs showed a significant bone formation as compared to CDG group.

**Conclusion:** DLNs shows promise as adjunctive local therapy for management of patients with chronic periodontitis.

**Clinical Relevance:** Scientific Rationale for Study: Evaluating the effect of doxycycline loaded nanoparticles gel and conventional doxycycline gel on treatment of chronic periodontitis. Principal Findings: Findings from this randomized, split mouth study of 40 sites among 20 patients with chronic periodontitis supported the potential of doxycycline loaded nanoparticles and conventional doxycycline gel for providing an effective therapy for chronic periodontitis, along with improving clinical parameter, bone density and decreasing matrix metalloproteinase 1. Practical Implications: Doxycycline loaded nanoparticles are proved to be more effective than conventional doxycycline gel as an adjunctive treatment of chronic periodontitis.

**Keywords:** Chronic periodontitis, Conventional doxycycline gel, Doxycycline loaded nanoparticles, Matrix metalloproteinase 1, Bone density.

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# Effect of Omega-3 Fatty Acids on Chronic Periodontitis Patients in Postmenopausal Women: A Randomised Controlled Clinical Study

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**Purpose:** To investigate changes in periodontal parameters and superoxide dismutase activity after root surface debridement with and without omega-3 fatty acid (omega-3 FA) supplementation in postmenopausal women.

**Materials and Methods:** Fifty postmenopausal women with chronic periodontitis were divided randomly into two groups. Group 1 (control group, n = 25) patients were provided with periodontal treatment in the form of scaling and root planing (SRP) plus soft gelatinous capsules containing only some olive oil, while group 2 (n = 25) received SRP along with systemic administration of omega-3 FAs in the same soft gelatinous capsules. Clinical parameters and superoxide dismutase (SOD) activity in the gingival crevicular fluid were recorded at baseline, 3 and 6 months after therapy.

**Results:** By the end of the study period, the omega-3-treated group achieved a greater mean probing pocket depth reduction, a mean gain in clinical attachment level especially in deep periodontal pockets, as well as a greater increase in SOD activity ( $p < 0.01$ ) compared to SRP alone.

**Conclusions:** Adjunctive omega-3 FAs supplements with SRP reduce periodontal inflammation and improve the status of systemic enzymatic antioxidants in postmenopausal women.

**Key words:** chronic periodontitis, omega-3 fatty acids, scaling and root planing

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Chronic periodontitis is defined as inflammation of the gingiva extending into the adjacent attachment apparatus. The disease is characterised by the loss of clinical attachment due to destruction of the periodontal ligament and the loss of the adjacent supporting bone.<sup>2</sup> Although the different forms of periodontitis are all caused by bacterial infection, some systemic factors are associated with the progression of periodontal diseases, such as smoking, diabetes mellitus, osteoporosis and stress.<sup>19</sup> Periodontal diseases represent an inflammatory reaction resulting from the interaction between pathogenic bacteria and the host's immune response. Upon stimulation by bacterial antigens,

polymorphnuclear leukocytes (PMN) produce reactive oxygen species (ROS) during the process of phagocytosis as part of the host response to infection. As a result, patients with periodontal diseases display increased PMN number and activity leading to a high degree of ROS release, culminating in oxidative damage to gingival tissue, periodontal ligament and alveolar bone. These ROS contribute to tissue destruction by damaging DNA, causing lipid peroxidation, and stimulating proinflammatory cytokine release.<sup>4</sup> The host has the ability to eliminate ROS and inhibit the tissue destruction caused by inflammatory reactions by releasing defensive substances (e.g. antioxidants) into the tissues.<sup>20</sup> Antioxidants are defined as molecules capable of slowing or preventing the oxidation of other molecules.<sup>5</sup> Antioxidants include superoxide dismutase (SOD), uric acid, ascorbic acid,  $\alpha$ -tocopherol, glutathione and albumin. One important antioxidant, SOD, catalyses the dismutation of the superoxide anion, thus defending the cells against the hazardous effects of ROS.<sup>15</sup> Moreover, menopause has been reported to be associated with an increase in oxidative stress and a decrease in antioxidants. The total of antioxidant capacity (TAOC) was found to be significantly lower in postmenopausal women compared to premenopausal ones.<sup>4</sup>

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## EFFECT OF METRONIDAZOLE LOADED NANOPARTICLES ON TREATMENT OF INDUCED PERIODONTAL DEFECTS IN DOGS

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Alaa M. Metwalli Moustafa\*\*\* and Tamer Elamer Abo Shady\*\*\*\*

### ABSTRACT

**Objective:** The aim of the present study was to compare between 25% metronidazole gel and 25% metronidazole loaded nanoparticle gel formulation on healing of experimentally induced periodontal defects in dogs.

**Materials and Methods:** Periodontal defects were induced by ligatures placement in 10 beagle dogs in both lower sites. The defects were randomly and equally allocated in a split-mouth design to either Metronidazole gel nanoparticles gel (25%) (Experimental site group I) or Metronidazole gel (25 %) (Control site group II). The animals were sacrificed with an overdose of anesthesia at 8 weeks and block sections of the defects were collected for histological and histometric analysis.

**Results:** The results showed improved outcomes in terms of bone as well as new cementum and functionally oriented periodontal ligament formation. However, sites treated with metronidazole loaded nanoparticles (25%) gel formula (experimental group I) showed significantly greater regenerative potential of the attachment apparatus in terms of newly formed cementum and bone compared to conventional metronidazole gel treated group.

**Conclusion:** This, in turn, proves that 25% metronidazole loaded nanoparticle gel is more efficient compared to conventional metronidazole gel in treatment of periodontal defects.

**KEY WORDS:** Metronidazole loaded nanoparticle. Metronidazole gel. Induced Periodontal defects.

### CLINICAL RELEVANCE:

**Scientific Rationale for Study:** Evaluating the effect of metronidazole loaded nanoparticles on the treatment of induced periodontal defects in dogs. **Principal Findings:** Findings from this animal study of 10 beagle dogs supported the potential of metronidazole loaded nanoparticles gel, as compared to 25% metronidazole gel, for providing a safe, inexpensive, and effective therapy for induced periodontitis by regenerating new bone as well as new cementum and forming functionally oriented periodontal ligaments. **Practical Implications:** Metronidazole loaded nanoparticles gel can be used as adjunctive treatment of periodontitis.

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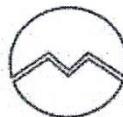
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### Evaluation of Strontium Ranelate Membrane in Gingival Recession Treatment: Histological Study in dogs.

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**Abstract: Background:** Gingival recession is the term that describes the migration of the gingival margin apical to cement-enamel junction. Strontium ranelate is a new active agent drug used for osteoporotic patients. It stimulates the new bone formation and decreases bone resorption. The aim of this study is to explore the effects of strontium ranelate membrane on gingival recession induced in dogs. **Methods:** In this study 8 adult male mongrel animal, buccal gingival recession deficiencies (upper right and left canine deficiencies in each dog) were created surgically under general anaesthesia. Each GR defect was subjected to one of two therapy methods: methyl cellulose membrane with coronally advanced flap (group I control) or strontium ranelate membrane with coronally advanced flap (group II experiment). The animals were sacrificed at 8weeks with an overdose of anesthesia and the specimens were processed for histological and histometric analysis. **Results:** Histological results revealed marked regeneration in strontium ranelate membrane group compared to control group. Histometric research showed a significant rise in the new bone and cement formation in group II instead of group I. There was also a significant decrease in amount of epithelium down growth in group II than control group. **Conclusion:** Strontium ranelate membrane is safe, inexpensive and induce regeneration in periodontal defect induced in dogs.

[Enas Ahmed Elgendi, Doaa A. Taiema, Amel M. Ezzat Abd-Elhamid, Alaa M. Metwalli Moustafa. Evaluation of Strontium Ranelate in Gingival Recession Treatment: Histological Study in dogs. *Life Sci J* 2019;16(12):1-10]. ISSN: 1097-8135 (Print) / ISSN: 2372-613X (Online). <http://www.lifesciencesite.com>. 1. doi:10.7537/marslsj161219.01.

#### 1. Introduction

Gingival recession (GR) is oral exposure of the root surface due to a shift of the gingival margin apically<sup>[1]</sup>. It is the gingiva's most common and disturbing condition and its occurrence increases with age<sup>[2]</sup>. Localized or generalized GR is a clinical characteristic of periodontal disease and is associated with medical problems such as hypersensitivity of the root layer, abrasion of the cervical base, erosion, plaque retention, root caries, and aesthetic dissatisfaction<sup>[3,4]</sup>.

The etiology is multifactorial and involves excessive or insufficient teeth brushing, tooth malposition, damaging periodontal disease, alveolar bone dehiscence, elevated muscle attachment, aberrant frenum pull, occlusal trauma, iatrogenic factors (such as orthodontic or prosthetic therapy) and smoking<sup>[5]</sup>.

GR causes loss of both soft and hard tissue, resulting in the development of numerous surgical techniques for gingival recession correction. Among the techniques reported are free gingival grafts, sliding pedicle grafts, subepithelial connective tissue grafts, envelope or tunneling techniques, the use of acellular dermal, connective

tissue allografts, guided tissue regeneration and coronally advanced flap (CAF)<sup>[6,7]</sup>.

The CAF is the most esthetically effective mucogingival procedure for correcting GR. It may be used to treat single or multiple sites, with adequate dimensions of keratinized gingival. In addition, there is no need for a second surgical site, as is the case with a free gingival or connective tissue graft. The results of this procedure have presented a percentage of root coverage varying from 70% to 99%, with a mean percentage of 83%<sup>[8,9]</sup>. Guided tissue regeneration has become part of everyday surgical periodontal practice. These treatment modalities use barrier membranes which ignore fast growing cells (i.e., gingival epithelial, gingival fibroblasts) while enabling mesenchymal progenitor proliferation and differentiation into osteoblasts, periodontal ligament fibroblasts, and cementoblasts<sup>[10]</sup>.

Different drugs were used to achieve periodontal regeneration use local delivery. Strontium ranelate (SR) is a medication for osteoporosis which promotes bone formation by osteoblasts, unlike any other product, and inhibits osteoclasts bone resorption, as do anti-resorptive agents<sup>[11]</sup>.



## 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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# Protective effect of vitamin D against rats' mandibular osteoporosis induced by corticosteroids and gamma rays

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## ABSTRACT

**Background:** Osteoporosis is a progressive systematic skeletal illness characterized by low bone mineral density (BMD), deterioration of microarchitecture of bone tissues and susceptibility to fracture caused by bone resorption. The study investigates the possible role of Alfacalcidol; vitamin D (Vit D) to mitigate osteoporosis induced by corticosteroid and  $\gamma$ -rays in rats. **Materials and Methods:** Eighty Sprague-Dawley rats were divided equally into eight groups: Control group (1 ml olive oil orally), Epirelefan group (7mg/kg sc), Vit D group (20,000 IU/kg orally), Vit D plus Epirelefan group, Vit D plus  $\gamma$ -rays (8 Gy) group, Epirelefan plus  $\gamma$ -rays group, Vit D plus Epirelefan plus  $\gamma$ -rays group and  $\gamma$ -rays groups. **Results:** In Epirelefan group, mandible bone has small cavities, micro fissures, thinning and decrease in the number of trabecular, which may appear rod-like and concave beside increase marrow cavities. In Epirelefan +  $\gamma$ -rays group, the lesions were more severe with increasing osteoclast and alteration of serum calcium, phosphate and alkaline phosphatase. The administration of Vit D before corticosteroid injection and pre  $\gamma$ -rays-irradiation has significantly reduced mandibular damage. **Conclusion:** Vit D could be efficient in mitigating osteoporosis occurred by corticosteroid and  $\gamma$ -rays in rat model.

**Keywords:** Osteoporosis,  $\gamma$ -rays, Epirelefan, Vit D, Rats.

## INTRODUCTION

Osteoporosis is a multifactorial skeletal disease, showing a decrease in bone mass and disruption of the microarchitectural structure of bone tissue, leading to weakness and easy fracture of bone<sup>(1)</sup>. Although osteoporosis usually is reported late in life, and age is a major risk factor, its origins can be tracked back into youth. However, there are many factors that could be directly related to development of osteoporosis and these include dietary calcium levels during periods of rapid bone growth<sup>(2)</sup>, genetic, lifestyle and hormonal elements<sup>(3)</sup>.

Glucocorticoids are essential therapeutic agents that have been used for their strong anti-inflammatory and immunosuppressive

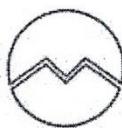
properties for over 50 years. Glucocorticoids have a harmful effect on bone formation, turnover and integrity. The main action is on osteoblasts, reducing replication and impairing differentiation and maturation, leading to decreased bone formation<sup>(4,5)</sup>. Osteocytes are also affected, with decreased cell function and increased apoptosis causing impairment of their ability to identify and repair bone microdamage. Reduced numbers of viable osteocytes are observed in iliac crest biopsies of patients on glucocorticoid treatment<sup>(6)</sup>. Vitamin D increases calcium absorption in the gastrointestinal tract as well as reabsorption in the distal renal tubules. Thus, patients receiving treatment with active vitamin D compounds should be monitored for hypercalcemia and hypercalcuria

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## Evaluation of Strontium Ranelate Membrane in Gingival Recession Treatment: Histological Study in dogs.

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**Abstract:** **Background:** Gingival recession is the term that describes the migration of the gingival margin apical to cement-enamel junction. Strontium ranelate is a new active agent drug used for osteoporotic patients. It stimulates the new bone formation and decreases bone resorption. The aim of this study is to explore the effects of strontium ranelate membrane on gingival recession induced in dogs. **Methods:** In this study 8 adult male mongrel animal, buccal gingival recession deficiencies (upper right and left canine deficiencies in each dog) were created surgically under general anaesthesia. Each GR defect was subjected to one of two therapy methods: methyl cellulose membrane with coronally advanced flap (group I control) or strontium ranelate membrane with coronally advanced flap (group II experiment). The animals were sacrificed at 8weeks with an overdose of anesthesia and the specimens were processed for histological and histometric analysis. **Results:** Histological results revealed marked regeneration in strontium ranelate membrane group compared to control group. Histometric research showed a significant rise in the new bone and cement formation in group II instead of group I. There was also a significant decrease in amount of epithelium down growth in group II than control group. **Conclusion:** Strontium ranelate membrane is safe, inexpensive and induce regeneration in periodontal defect induced in dogs.

[Enas Ahmed Elgendi, Doaa A. Taiema, Amel M. Ezzat Abd-Elhamid, Alaa M. Metwalli Moustafa Evaluation of Strontium Ranelate in Gingival Recession Treatment: Histological Study in dogs. . *Life Sci J* 2019;16(12):1-10]. ISSN: 1097-8135 (Print) / ISSN: 2372-613X (Online). <http://www.lifesciencesite.com>. 1. doi:[10.7537/marslsj161219.01](https://doi.org/10.7537/marslsj161219.01).

### 1. Introduction

Gingival recession (GR) is oral exposure of the root surface due to a shift of the gingival margin apically<sup>[1]</sup>. It is the gingiva's most common and disturbing condition and its occurrence increases with age<sup>[2]</sup>. Localized or generalized GR is a clinical characteristic of periodontal disease and is associated with medical problems such as hypersensitivity of the root layer, abrasion of the cervical base, erosion, plaque retention, root caries, and aesthetic dissatisfaction<sup>[3,4]</sup>.

The etiology is multifactorial and involves excessive or insufficient teeth brushing, tooth malposition, damaging periodontal disease, alveolar bone dehiscence, elevated muscle attachment, aberrant frenum pull, occlusal trauma, iatrogenic factors (such as orthodontic or prosthetic therapy) and smoking<sup>[5]</sup>.

GR causes loss of both soft and hard tissue, resulting in the development of numerous surgical techniques for gingival recession correction. Among the techniques reported are free gingival grafts, sliding pedicle grafts, subepithelial connective tissue grafts, envelope or tunneling techniques, the use of acellular dermal, connective

tissue allografts, guided tissue regeneration and coronally advanced flap (CAF)<sup>[6,7]</sup>.

The CAF is the most esthetically effective mucogingival procedure for correcting GR. It may be used to treat single or multiple sites, with adequate dimensions of keratinized gingival. In addition, there is no need for a second surgical site, as is the case with a free gingival or connective tissue graft. The results of this procedure have presented a percentage of root coverage varying from 70% to 99%, with a mean percentage of 83%<sup>[8,9]</sup>. Guided tissue regeneration has become part of everyday surgical periodontal practice. These treatment modalities use barrier membranes which ignore fast growing cells (i.e., gingival epithelial, gingival fibroblasts) while enabling mesenchymal progenitor proliferation and differentiation into osteoblasts, periodontal ligament fibroblasts, and cementoblasts<sup>[10]</sup>.

Different drugs were used to achieve periodontal regeneration use local delivery. Strontium ranelate (SR) is a medication for osteoporosis which promotes bone formation by osteoblasts, unlike any other product, and inhibits osteoclasts bone resorption, as do anti-resorptive agents<sup>[11]</sup>.

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### UV- Spectrophotometric Measurement of Sustained Release of Strontium Renelate Loaded on Platelet Rich Fibrin Membrane: An In-vitro Study

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**Abstract:** **Objective:** To study the suitability of the platelet rich fibrin membrane (PRF) as suitable scaffold and delivery system to carry and allow sustained-release of strontium ranelate (SR) and whether the SR can decrease degradation process of PRF. **Study Design:** 4 membranes of PRF and 4 membranes of strontium ranelate loaded on PRF (SR/PRF) were prepared. 2 membranes of PRF and 2 SR/PRF were examined under electron microscope. 2 membranes of PRF and 2 SR/PRF were investigated to determine the degradation time each one. The concentrations of SR released from the SR/PRF were calculated at 1, 2, 4, 6, 8, 10, 24, 48, 60 and 72 hours by spectrophotometric methods. **Results:** Electron microscope scan showed that SR was carried on PRF membrane. SR/PRF was found to be degraded slower than PRF membrane. Sustained-release of SR from PRF was found to be continuous from the first hour to the end of 72 hours. Peak concentrations of SR in the degradation solution was reported on the first hour then decreased along 72 hours. **Conclusion:** SR could be loaded on PRF and it increase the life time of the membrane. SR is released in a sustained manner from PRF membrane.

[Enas Ahmed Elgendi, Malak Yousef Mohamed Shoukheba. UV- Spectrophotometric Measurement of Sustained Release of Strontium Renelate Loaded on Platelet Rich Fibrin Membrane: An In-vitro Study. *Life Sci J* 2019;16(12):92-98]. ISSN: 1097-8135 (Print) / ISSN: 2372-613X (Online). <http://www.lifesciencesite.com>. 13. doi:[10.7537/marslsj161219.13](https://doi.org/10.7537/marslsj161219.13).

**Keywords:** Platelet rich fibrin, Strontium ranelate, Scanning electronmicroscopy, UV spectrophotometry

#### 1. Introduction:

In human beings periodontitis is one of the most inflammatory diseases spread widely and the principle etiology for causing tooth loss in adults, by means of destroying the supportive teeth components, which comprise bone and gingival tissues and the periodontal ligament.<sup>1</sup>

The definitive aim of periodontal therapy is to stop periodontal interruption and to initiate restoring of the degenerated periodontal tissues involving periodontal ligament (PDL), gingival connective tissue, cementum and alveolar bone.<sup>2</sup> Conservative therapy for periodontitis chiefly comprises of oral hygiene measures, root planning and scaling. This regimen of treatment is generally effective in stopping additional disease development, but still the regeneration of destructive tissues representing clinical tasks. Advanced treatments involved using of local delivery system,<sup>3</sup> bone grafts, different growth factor-based treatments and guided tissue regeneration (GTR).<sup>4-6</sup>

The introduction of a therapeutic materials in the body by using advanced techniques as drug delivery system (DDS), where DDS is defined as a tool or a formulation that improves and enables the efficiency

of drugs, in addition to the safety through controlling the rate of release, site of discharge of therapies in the body and the period of exposure to drugs.<sup>7</sup>

The second generation which introduced recently in field of platelet concentrate is called Choukroun's platelet rich fibrin (PRF) in which a high quantities of growth factors, platelets, fibrin membrane, leukocyte and cytokines are added. The capability of PRF was proven to increase collagen synthesis and proliferate fibroblasts<sup>8</sup> and are applied extensively to repair and improve the regeneration of both soft tissues and hard tissues post different periodontal surgical operations.<sup>9,10</sup>

One of the therapies which are used in the regeneration of soft and hard tissues is the strontium ranelate (SR), it acts by two mechanisms, one through reducing bone resorption via suppressing osteoclastic action and the other mode of action via initiating formation of bone through motivating replication of preosteoblast.<sup>11</sup> Moreover, SR has the ability for increasing the structural and biomechanical characters of bone like density of minerals.<sup>12</sup> In addition, strontium ranelate was established to conjugate with hydroxyapatite crystal surfaces for instance calcium



## RESEARCH ARTICLE

**RADIOGRAPHIC AND IMMUNO HISTOCHEMICAL DIAGNOSTIC STUDY OF STRONTIUM RANELATE AND METAL-SUBSTITUTED HYDROXYAPATITE BONE GRAFT MATERIALS IN DIABETES MELLITUS WITH CHRONIC PERIODONTITIS**

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Strontium Ranelate, Metal Substituted Hydroxyapatite, Digital Radiograph, Immunohistochemical, Matrix Metalloproteinases2

**Abstract**

**Objective:** The aim of the present study is to assess the radiographic and immunohistochemical effect of strontium ranelate (SR) and metal substituted hydroxyapatite (MSHA) on the treatment of chronic periodontitis among diabetic rats

**Materials and Methods:** The study involved ten adult male and female rats (1-month-old) weighing (250- 300g). After a 24-hour fast, a single intraperitoneal dose of freshly prepared alloxan was injected to induce diabetes. A month after the injection of alloxan, the rats were randomly assigned to one of the two treatment modalities: SR with gengigel or MSHA with gengigel. Digital periapical radiography was taken at baseline, a month after the injection of alloxan to see resorbed alveolar bone and after 3months post-operative surgery for radiographic assessment. The diabetic rats were sacrificed using an overdose of anesthesia, and gingival tissue samples were collected. The specimens were processed for hematoxylin and eosin (H & E) staining and immune stain for expression of matrix metalloproteinases 2 (MMP-2).

**Results:** Digital periapical radiography showed an increase of nearly 0.37 mm in the height of the alveolar bone in the side of the SR group while the other side in the MSHA group increased by nearly 0.12 mm. A statistically significant reduction in the expression of MMP2 in the SR group as compared to the MSHA group was found upon comparing the immunohistochemical results of the 2 groups.

**Conclusion:** Radiographic and immunohistochemical results showed that SR was a promising material in the treatment of periodontal diseases.

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## Original Article

# Clinical and radiographic diagnostic study of strontium ranelate and metal-substituted hydroxyapatite bone graft materials in diabetes mellitus with chronic periodontitis

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Metal-substituted  
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Periodontal flap,  
Strontium ranelate

### Abstract

**Background:** The present study aimed to assess the clinical and radiographic effect of strontium ranelate and metal-substituted hydroxyapatite as bone graft materials on treating chronic periodontitis among diabetes mellitus patients.

**Methods.** A randomized split-mouth study was conducted on 20 sites in 10 controlled type II diabetic patients suffering from chronic periodontitis. After phase I therapy, the sites were randomly allocated by a computer-generated table into two groups. Group 1: A mucoperiosteal flap was elevated in 10 sites, followed by the placement of strontium ranelate mixed with Gengigel. Group 2: A mucoperiosteal flap was elevated in 10 opposite sites, followed by the placement of metal-substituted hydroxyapatite mixed with Gengigel. Clinical parameters were assessed at baseline and -3 and -6month intervals. Cone-beam computed tomography (CBCT) was used at baseline and after six months to assess bone gain.

**Results.** The two treatment modalities resulted in a statistically significant reduction in clinical parameters at the -3 and -6month intervals compared to the mean baseline value. Intergroup comparison showed a significant reduction in probing pocket depth and clinical attachment loss in group 1 compared to group 2. Comparison of the two sides by CBCT showed a significant increase in the alveolar bone height in the SR group than the metal-substituted hydroxyapatite group.

**Conclusion.** Clinical and radiographic results showed a significant improvement in the two groups and provided evidence that strontium ranelate is promising in treating periodontal diseases.

## Introduction

There is a clear relationship between the degree of hyperglycemia and the severity of periodontitis.<sup>1</sup> The possible mechanisms by which DM might affect the periodontium are increased counts of sub-gingival pathogenic bacteria such as *Capnocytophaga*, *anaerobic vibrios*, *Actinomyces* species, *Porphyromonas gingivalis*, *Prevotella intermedia*, and *Aggregatibacter actinomycetemcomitans*. Neutrophil impairment leads to increased susceptibility to periodontitis in people with diabetes. Hyperglycemia induces decreased chemotaxis, phagocytosis, and intracellular bacterial activity in diabetics. Collagen from diabetes patients has been reported to be more insoluble and resistant to digestion, directly impairing degradation, and remodeling. The basement membrane protein undergoes non-enzymatic glycosylation when subjected to hyperglycemic con-

ditions. The gingival capillaries of diabetic patients have greater basement membrane thickness.<sup>2</sup>

Alveolar bone loss is a hallmark of periodontitis progression, and its prevention is a crucial clinical challenge in periodontal disease treatment. Periodontal treatment aims to eliminate biofilms, remove microbial deposits from the root surface, decrease tissue destruction, and regenerate lost tissues.<sup>3</sup>

Bone grafts are frequently used in oral surgeries to facilitate or promote bone regeneration, provide mechanical support for the membrane, fill bone defects, increase bone augmentation, and stabilize blood clots. Many bone graft materials are available to resolve bone defects, including autografts, allografts as freeze-dried bone from human donors, xenografts from animals or plants, and alloplasts, which are synthetic bone substitutes as polymers, bioactive glass,

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## RESEARCH ARTICLE

**COMPARISON BETWEEN STRONTIUM RANELATE AND METAL SUBSTITUTED HYDROXYAPATITE AS GRAFTING MATERIALS IN TREATMENT OF PERI-IMPLANT BONY DEFECTS WITH IMMEDIATE IMPLANTS (CLINICAL AND EXPERIMENTAL STUDY)**

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**Abstract**

**Objective:** The aim of this study is to compare between both of strontium ranelate and metallic substitute of hydroxyapatite as grafting materials in the treatment of peri-implant bony defects with immediate placement of dental implant in type I extraction sites within maxillary esthetic zone among clinical and experimental levels. This assessment was based on clinical, radiographic and histological studies.

**Subjects and Methods:** The present study was carried on two types of population among both experimental levels on experimental white albino rabbits and on clinical level among human patients for replacement of non-restorable maxillary anterior and/or premolar teeth within esthetic zone by immediate implant. A written informed consent was obtained from all patients before their participation in this study. Patients were classified into two groups: the first one was with five patients with non-restorable maxillary anterior or premolar tooth that was treated by an immediately placed implant in conjunction with metallic substituted hydroxyapatite while the second one was treated by an immediately placed implant in conjunction with strontium ranelate as grafting material. The second sample population of study was carried out among ten male white (newzland) experimental rabbits with average body weight between 2.5 and 3 KG and within suitable environmental conditions in Medical Experimental Research Center (MERC) in faculty of medicine, Mansoura University. All rabbits sample was also divided equally and randomly in two groups with five rabbits within each one by the same criteria as mentioned where the first group was composed of five rabbits that received dental implant within intentionally made defect in tibia by trephine bur in conjunction with metallic substituted hydroxyapatite as grafting material within gap between implant and defect and the second group was with the same criteria and procedures with strontium ranelate as grafting material within the defect. Pre-operative photographs and cone beam computed tomography (CBCT) were taken for study sample population. Within clinical patients, immediately placed dental implant have been placed in anterior esthetic zone with bone grafting around dental implant

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## Oral Manifestations of COVID-19 Patients: Two Case Reports of Egyptian Patients

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### ABSTRACT

Nowadays, Coronavirus disease (COVID-19) has emerged as a terrifying global health threat. Saliva and nasopharyngeal secretions can hold a high viral load, which threatens the dental profession and makes it at the top of the list of infection spread. Oral transmission has been considered to be one of the most important methods of COVID-19 infection. Change or loss of taste and smell sensation are the most important symptoms for covid-19 patients. The oral cavity offers clues about the health of the whole body and a mirror reflecting the state of your overall health. Many pieces of literature reporting that oral lesions could be a probable clinical characteristic of COVID-19. However, oral manifestations remain uncertain, and still a gap of knowledge about the impact of COVID-19 on the oral cavity. All the cases in this report detected by chance from daily life and the patients confirmed positive COVID after detection of the oral lesions. Our aim is to report additional cases of COVID patients with oral manifestation and its importance in the early diagnosis of COVID-19.

**Key words:** COVID-19, SARS-CoV-2, Coronavirus, Oral manifestation, oral lesions

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### INTRODUCTION

Acute respiratory syndrome coronavirus 2 (SARS-CoV-2) that emerged at 2019 is responsible for large-scale of illnesses and deaths around the world. It is caused by a single positive stranded RNA virus from the coronavirus (CoV) family of Coronaviridae [1].

The mode of transmission of SARS-CoV-2 occurs by droplets or contact transmission. Saliva can carry a risk of transmission of COVID-19, either by direct contact or indirect contact with contaminated stuff [2,3].

A study has noticed the presence of SARS-CoV-2 in the saliva of 91.7% COVID-19 patients, with a median viral load of  $3.3 \times 10^6$  copies/ml [4], and the detection rate of SARS-CoV-2 has been reported to be higher in saliva than nasopharyngeal swabs [5]. The incubation period of COVID-19 ranged from 1 to 14 day. Early detection of symptoms is life-saving [6]. Mucocutaneous manifestations can play a role in the early diagnosis [7].

The characteristic clinical symptoms of COVID-19 patients were high temperature, cough, sore throat, dyspnea, and muscle pain, with abnormal chest CT, whereas the less dominant symptoms were sputum secretion, headache, haemoptysis, and gastrointestinal disturbance. In progressive cases, pneumonia, myocardial damage, coagulation dysfunction, encephalopathy, organ failure, and death. A great number of studies reported that the mouth is one of the extra respiratory places that have shown manifestations in COVID-19 patients [8]. Moreover, recent reports revealed that xerostomia, change of taste and smell which might arise before the conventional signs of COVID-19 may represent as the first and only manifestations of the virus [9-11].

Common laboratory findings include bilateral or unilateral ground-glass opaqueness, and patchy shadowing on chest CT [12], and increases in neutrophil/lymphocyte ratio, serum D-dimer, and lactate dehydrogenase, in aggressive cases [13].

Current evidence indicated that angiotensin-converting enzyme 2 (ACE2) acts as the primary host cell receptor of the virus as it binds to ACE2 by the spike-like protein on its surface, hence, ACE2 works as a gateway into the cell for the coronavirus [14,15]. That is why the lung is the

## RESEARCH ARTICLE

**Clinical and radiographic assessment of autogenous dentin nanoparticles in treatment of stage iii periodontitis: a split-mouth clinical study**Enas Ahmed Elgendi<sup>1</sup>, Ahmed Mohamed Elgendi<sup>2</sup>, Ola Mohammad ElBorady<sup>3</sup>**Abstract**

**Objective:** To compare autogenous dentin nanoparticles with allograft bone grafts in the treatment of stage III periodontitis.

**Method:** The randomised study was conducted at the Department of Oral Medicine and Periodontology, Faculty of Oral and Dental Medicine, Kafrelsheikh University Hospital, Egypt, from January 2021 to January 2022, and comprised adult patients of either gender with stage III periodontitis. Each patient's bilateral intrabony defect was randomly treated with an allograft on one side and a graft made of dentin nanoparticles on the test side. Each patient's removed tooth was ground into these nanoparticles. Both groups had their probing pocket depth and clinical attachment loss evaluated at baseline and six months after surgery. Additionally, digital periapical films were collected in both groups at baseline and six months after therapy to assess vertical bone loss. Data was analysed using SPSS 20.

**Results:** Of the 20 patients, 8(40%) were males and 12(60%) were females with overall mean age  $31.00 \pm 4.06$  years (range: 18–50 years). Of the 40 sites, 20(50%) each were in test and control groups. Compared to baseline values, both groups showed significant improvement in probing pocket depth, clinical attachment loss and vertical bone loss post-intervention ( $p<0.05$ ). There was no significant difference between the postoperative outcomes of the two groups ( $p>0.05$ ).

**Conclusion:** Autogenous dentin nanoparticles were found to be an effective and promising biomaterial for bone regeneration in intrabony defects.

**Clinical Trial:** NCT05258006 link: <https://clinicaltrials.gov/ct2/show/NCT05258006>, Registration date of the Trial 10/2/2022.

**Keywords:** Bone transplantation, Tuberculin, Autografts, Heterografts, Periodontitis, Nanoparticles, Dentin.

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**Introduction**

Periodontitis was the sixth most prevalent condition in the world affecting millions of people worldwide in 2017.<sup>1</sup> Periodontal disease-related tooth loss disrupts a person's quality of life, especially when it has an impact on their health, looks, and nutritional condition.<sup>2</sup> Regeneration of structures lost to disease is the ultimate goal of periodontal therapy. Open-flap debridement is just one example of a traditional surgical technique that has limited potential for regeneration. Periodontal regeneration currently uses a variety of substances, including biological modifiers, barrier membranes, and bone replacement grafts.<sup>3</sup>

The main sources of bone grafting are synthetic mineral materials and allogeneic bone. Despite the need to harvest bone and the potential morbidity associated with it, a fresh autogenous bone graft is still regarded as the gold standard because it demonstrates bioactive cell instructive matrix properties, osteoinductivity, osteoconductivity, and

osteogenicity, and is non-immunogenic and non-pathogenic.<sup>4</sup> A tooth that is extracted can be easily thrown into the yellow bag, but one must think twice before doing that. Studies have shown that patient-extracted teeth that have been cleaned, ground down, demineralised and sterilised can be a very successful graft to replace alveolar bone deficiencies in the same patient.<sup>5,6</sup>

Dentin and bone share a biochemical makeup, hence, they could both be used as bone graft materials. Like bone, dentin has an equal amount of organic and inorganic materials. Dentin contains 70–75% inorganic content, 20% organic content, and 10% water; the inorganic, organic, and water contents in alveolar bone are 65%, 25%, and 10%, respectively. Type I collagen accounts for 90% of the organic contents in dentin and plays a supporting and connecting role during bone formation.<sup>6</sup> The remaining 10% of the organic portion of dentin is composed of non-collagenous proteins (NCPs) that can induce bone formation, such as bone morphogenetic protein (BMP), insulin-like growth factor-II (IGF-II) and transforming growth factor-beta (TGF-β). In the relationship between non-collagen organic material and jaw bone repair, BMP is a key factor for bone repair.<sup>7</sup>

Nanomaterials are substances with component sizes in at least one dimension ranging from 0 to 100nm. In

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## RESEARCH ARTICLE

## The effect of interleukin-6 and procalcitonin level on the development of oral manifestation in hospitalized COVID-19 patients

Enas Ahmed Elgendi, Ahmed Mohammad Ali Elgendi, Marwa Sabry, Mohamed Kamal Salama, Tamer Aboshady

### Abstract

**Objective:** To evaluate the effect of interleukin-6 and procalcitonin levels in plasma on the development of oral manifestation in patients of coronavirus disease-2019.

**Methods:** The case-control study was conducted from January to September 2021 at Kafrelsheikh University Hospital, Egypt, and comprised severe coronavirus disease. One hundred patients of either gender aged 30-60 years were included. The patients were divided into two equal groups, with group I having patients with oral manifestations, and group II had those without any oral symptoms. Plasma samples from both the groups were used to determine serum interleukin-6 and procalcitonin levels using electrochemiluminescence immunoassay. Data was analysed using SPSS 20.

**Result:** Of the 100 patients, 50(50%) were in each of the two groups. Group I had 29(58%) males and 21(42%) females with overall mean age  $44.83 \pm 6.12$  years. Group II had 26(52%) males and 24(48%) females with overall mean age of  $43.68 \pm 4.62$  years. Interleukin 6 was significantly high in group I than in group II ( $p < 0.05$ ), while there was no significant difference between the groups for procalcitonin level ( $p > 0.05$ ).

**Conclusion:** Interleukin-6 level could play an important role in the development of oral manifestation in coronavirus disease-2019 patients.

**Keyword:** Interleukin, Procalcitonin, Ageusia, COVID-19, Gingivitis, Candidiasis, Mucous membrane, Immunoassay.

DOI: 10.47391/JPMA.EGY-S4-39

### Introduction

The single-chain ribonucleic acid (RNA) virus known as the severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) caused the coronavirus disease-2019 (COVID-19), which spread quickly throughout the globe by the direct touch, saliva in the form of tiny droplets, and aerosol formation routes of transmission. Fever, headache, sore throat, dyspnoea, dry cough, abdominal pain, vomiting and diarrhoea are the most typical clinical symptoms.<sup>1</sup> The earliest identified oral symptom of COVID-19 is loss of taste, which the virus can also cause along with symptoms in the oral cavity. Among the observed oral symptoms during and after COVID-19 are taste impairment, oral mucosal abnormalities, like petechiae, ulcers, plaque-like lesions, recurrence of the herpes simplex virus 1 (HSV1), geographical tongue, desquamative gingivitis and mucormycosis, as well as dry mouth. The most typical locations for mucosal lesions are tongue, palate and labial mucosa. The precise aetiology of these oral symptoms is uncertain.<sup>2</sup>

There are four different types of COVID-19 pneumonia: mild, moderate, severe and critical. Mild pneumonia is defined as infections without symptoms or minor clinical

signs without abnormal chest imaging findings. Moderate pneumonia is thought to be indicated by both clinical symptoms and atypical chest imaging findings. Patients are diagnosed with severe pneumonia when the infection gets so bad that any of the following criteria is met: 93% oxygen saturation at rest, a significantly increased breathing rate of roughly 30 breaths per minute (bpm), or a partial pressure of oxygen ( $\text{PaO}_2$ ) /fraction of inspired oxygen ( $\text{FiO}_2$ ) reading of  $<300\text{mmHg}$  ( $1\text{mmHg} = 0.133\text{ kPa}$ ). If any of the following symptoms exist and the illness worsens quickly, critical pneumonia may result: shock, other organ failure necessitating monitoring in a critical care unit (CCU), respiratory failure necessitating mechanical ventilation.<sup>3</sup>

The pathophysiology of COVID-19 is presumed to be particularly dependent on interleukin-6 (IL-6). It is crucial for regulating a number of viral infections and is mostly produced by macrophages and T lymphocytes in response to viruses. While IL-6 at homeostatic levels helps heal tissue wounds and infections, its exaggerated production significantly fuels cytokine storms. In COVID-19, radiological alterations and illness stages have a positive correlation with IL-6.<sup>4,5</sup> Hospitalised individuals with moderate to severe types of COVID-19 usually have high levels of procalcitonin (PCT), the hormone's 116-amino acid precursor. PCT has been interpreted as a biomarker for secondary bacterial infections in COVID-19 and is typically used to identify systemic bacterial infections.<sup>6</sup>

Department of Oral and Dental Medicine, Kafrelsheikh University, Egypt.

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J Pak Med Assoc (Suppl. 4)

## RESEARCH ARTICLE

**Effect of corticosteroid and immune-suppressive drugs on oral manifestations in hospitalized COVID-19 patients**

Ahmed Mohamed Al Elgendi, Enas Ahmed Elgendi, Marwa Sabry, Mohamed Kamal Salama, Tamer Aboshady

**Abstract**

**Objective:** To explore if the oral lesions in coronavirus disease-2019 patients are caused by the drugs used in the treatment or by the virus itself.

**Method:** The cross-sectional study was conducted from September 2020 to September 2021 at the Kafrelsheikh University Hospital, Egypt, and comprised coronavirus disease-2019 patients of either gender aged 20-60 years having severe pneumonia and breathing difficulties who had no comorbidities. Based on the level of interleukin-6 and procalcitonin, the patients were classified into high group I receiving tocilizumab and methylprednisolone, medium group II receiving methylprednisolone alone, and low group III receiving antiviral drugs. The oral manifestations were recorded at the time of admission before treatment and at 2 weeks after the respective treatment. Data was analysed using SPSS 20.

**Results:** Of the 90 patients, 30(33.3%) were in group I; 16(%) males and 14(%) females with mean age  $44.82 \pm 6.10$  years. Group II had 27(%) patients; 14(%) males and 13(%) females with mean age  $43.74 \pm 4.87$  years. Group III had 33(%) patients; 9(%) males and 14(%) females with mean age  $42.66 \pm 2.51$  years ( $p > 0.05$ ). There was no significant difference among the groups at baseline and after 2 weeks of treatment regarding oral manifestations. Intragroup comparison demonstrated a significant difference in the two values in all the three groups ( $p < 0.05$ ).

**Conclusion:** Oral lesions in coronavirus disease-2019 patients were caused by the virus itself rather than the drugs used in its treatment.

**Keywords:** Tocilizumab, Dentists, Methylprednisolone, COVID-19. DOI: 10.47391/JPMA.EGY-54-38

**Introduction**

Severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) is an enveloped, positive-sense, single-stranded ribonucleic acid (RNA) virus, and 80% of patients have moderate symptoms, 20% may have a serious illness, and 5% may have pneumonia or acute respiratory distress syndrome (ARDS), which would necessitate hospitalisation in an intensive care unit (ICU) and mechanical ventilation.<sup>1</sup>

About 15% of patients require oxygen administration, which is the cornerstone of supportive care. In contrast, severe patients may require invasive mechanical breathing in up to 7% of instances.<sup>2</sup> In coronavirus disease-2019 (COVID-19) patients, interleukin-6 (IL-6) levels are significantly elevated and are associated with suboptimal clinical results. Treatment for COVID-19 patients, who have dysregulated host responses may depend on IL-6 inhibition as a novel target.<sup>3</sup> In fact, several real-world experiences with COVID-19 patients suggest that anti-inflammatory medications might be helpful. Corticosteroids have potent anti-inflammatory effects by reducing the generation of

proinflammatory cytokines and chemokines together with lowering the activation of T cells, monocytes and macrophages.<sup>4</sup> In fact, among 201 ARDS patients, short-term steroid therapy was linked to decreased mortality.<sup>5</sup>

Additionally, tocilizumab (TZM) (Actemra<sup>®</sup>), the first marketed IL-6 blocking antibody, has proven to be safe and effective in treating COVID-19 after data on the emergence of an inflammatory cytokine storm in extreme cases. It does this by targeting IL-6 receptors. Because the monoclonal antibody binds to the IL-6 receptor and inhibits the IL-6-mediated inflammatory response, it is acceptable in the treatment of COVID-19-induced inflammation.<sup>6</sup>

According to recent studies, people with COVID-19 exhibit many clinical characteristics along with oral symptoms. The most frequently documented clinical oral symptoms in patients with COVID-19 include ulcers, blisters, necrotising gingivitis, opportunistic co-infections, salivary gland changes, white and erythematous plaques, and gustatory dysfunction. The loss of taste and smell usually coincides with the lesions.<sup>7,8</sup>

However, the exact relationship between many of these oral lesions and pathological processes of SARS-CoV-2 infection is still a subject of investigation.

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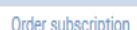
Khalifah, Mosaad Abdaljawwad / Elgendi, Ahmed Mohamed Ali / Elgendi, Enas

## Untreated Mineralized Dentin Graft Versus Xenograft Around Immediately Placed Dental Implants in the Mandibular Anterior Region: A Randomized Controlled Clinical Trial

**Purpose:** The structural and compositional similarities between dentin and alveolar bone formed the basis for utilizing dentin for bone regeneration. Various authors recommended using treated mineralized, partially demineralized, and demineralized dentin grafts over xenografts because of their comparable clinical and radiographic results and lower costs. Therefore, the current study aimed at comparing the effect of untreated mineralized dentin grafts (UMDG) versus xenografts in vertical and horizontal augmentation around dental implants that were immediately placed in the mandibular anterior region. **Materials and methods:** A total of 56 patients who required immediate dental implant placement in the lower anterior region were randomly allocated to group I (study), where ground dentin was washed with normal saline and placed around the dental implants, and to group II (control), where xenograft was used. The primary implant stability was measured at the time of implant placement. Secondary stability, plaque index (PI), bleeding index (BI), probing depth (PD), and keratinized mucosa width (KMW) were assessed at baseline (time of definitive abutment and temporary crown placement) and then at 3, 6, and 12 months. Pain and the number of analgesics consumed were assessed daily during the first postoperative week. Marginal bone loss (MBL) and radiodensity were assessed radiographically. **Results:** There were no significant differences between both groups in terms of postoperative pain, the number of analgesic tablets consumed, peri-implant mucositis, or peri-implantitis. Both groups showed comparable results for the PI, BI, and BD. Moreover, there was no statistical difference between both groups with regard to primary implant stability and secondary stability at baseline and 12 months. Group I showed significantly lower secondary stability after loading at 3 and 6 months and significantly greater bone loss and lower bone density before exposure. KMW and MBL after exposure were significantly higher in group I at all time points. **Conclusion:** Although UMDG showed similar clinical results as xenografts, including primary and secondary implant stability, they had higher resorption rates than xenografts. Therefore, treatment of the dentin graft is required. Thus, the authors do not recommend using untreated mineralized dentin grafts.

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**MSc, MD** Oral Medicine, Periodontology  
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Professor of Oral Medicine,  
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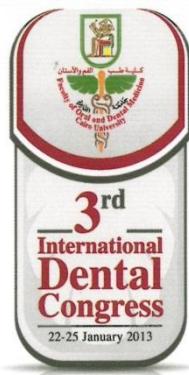
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فندق إنتركونتيننتال - سيناء ستارز  
٢٢-٢٥ يناير ٢٠١٣

Faculty of Oral and Dental Medicine  
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3rd International Dental Congress  
INTERCONTINENTAL-CITYSTARS  
22th - 25th January, 2013

### To whom it may concern

This is to certify that **Dr. Enas Ahmed El-Gendy** presented a Poster entitled:

*"Therapeutic Effect of Systemic Omega-3 Polyunsaturated Fatty Acids On Quality of Life in Patients Suffering from Recurrent Aphthous Stomatitis Unresponsive to Topical Therapy"*

In the 3<sup>rd</sup> International Dental Congress held in Intercontinental CityStars hotel from 22<sup>nd</sup> -25<sup>th</sup> January 2013.

This research was carried by:

- Dr. Amr M. El-Khouli

Associate Professor of Oral Medicine, Periodontology, Oral Diagnosis and Radiology Department, Faculty of Dentistry, October 6 University

- Dr. Enas Ahmed El-Gendy

Lecturer of Oral Medicine, Periodontology, Oral Diagnosis and Radiology Department, Faculty of Dentistry, October 6 University

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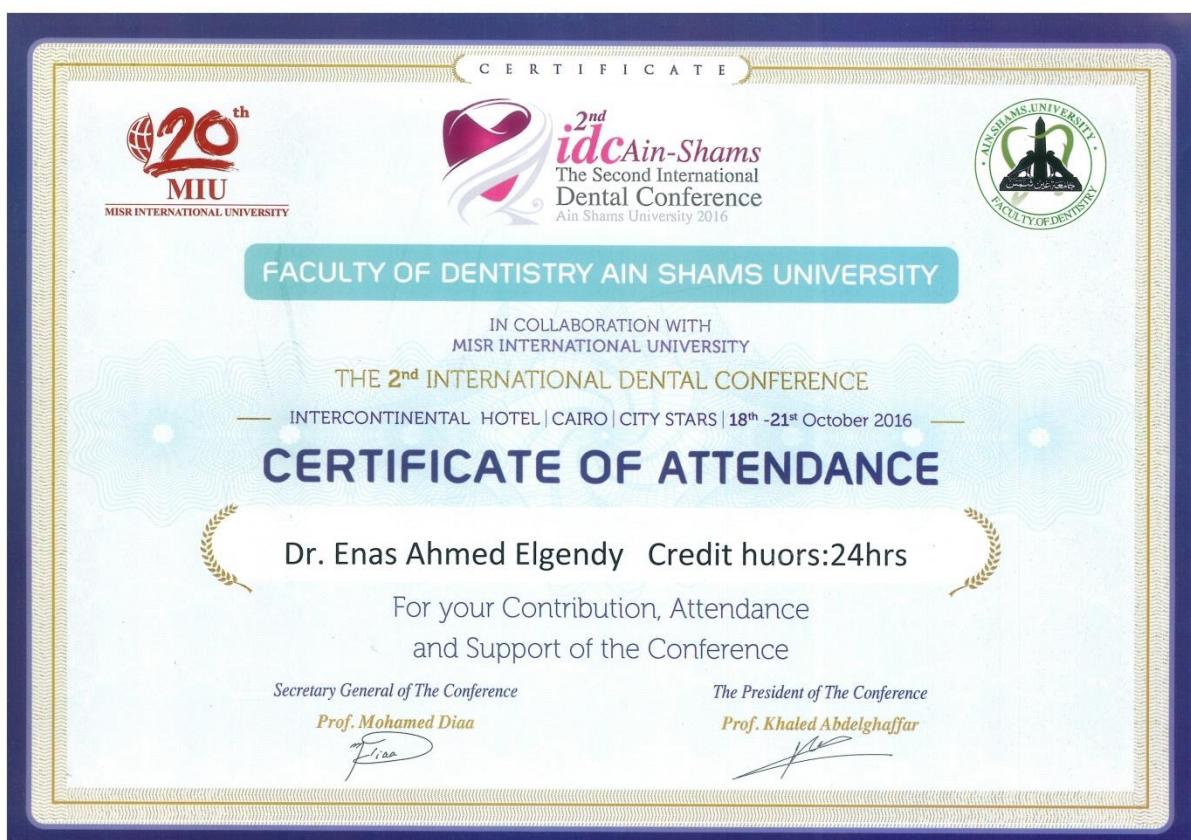
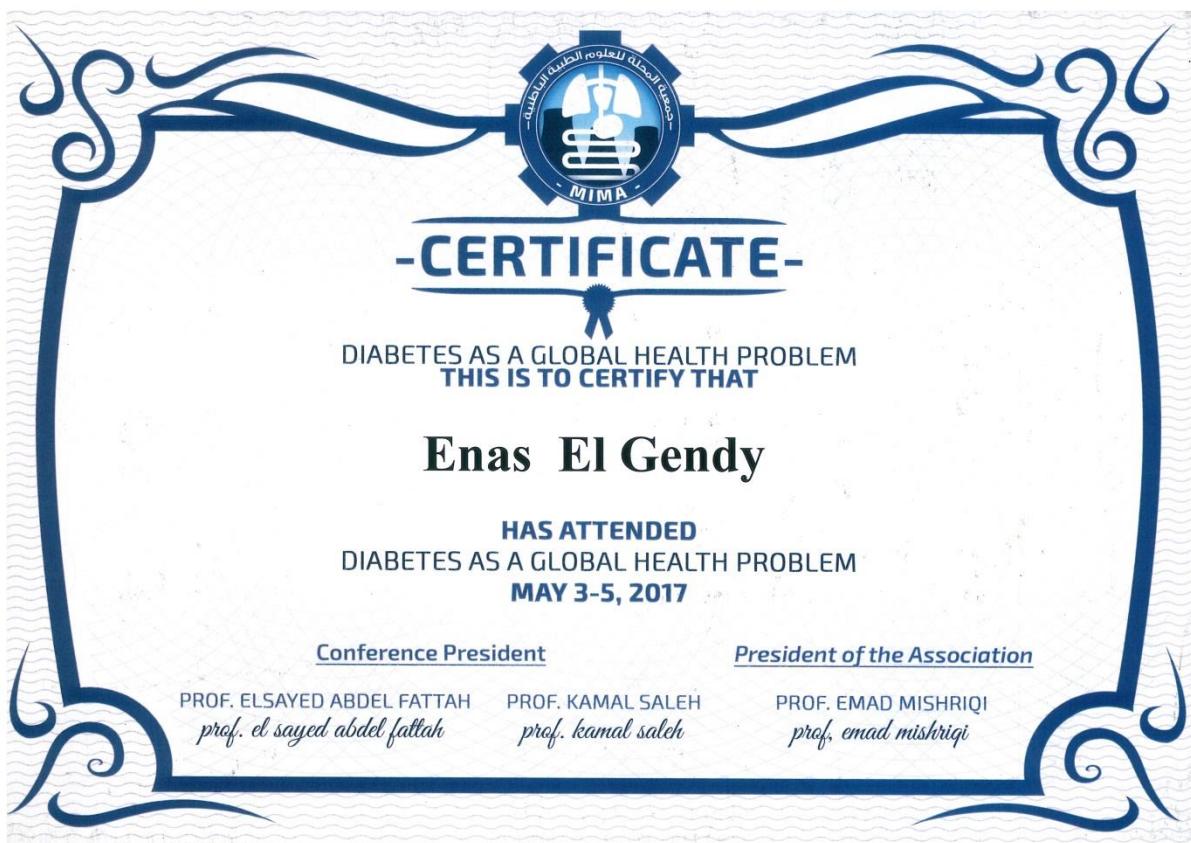
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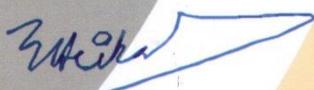
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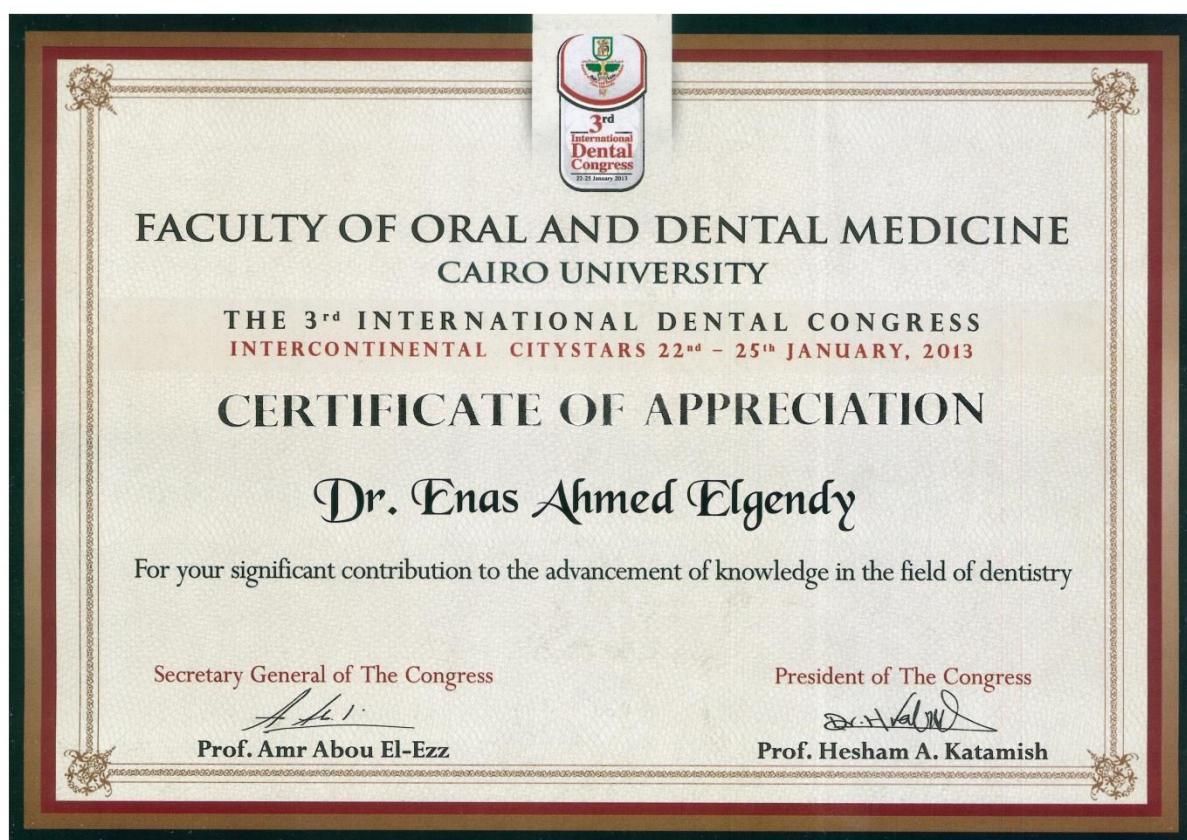
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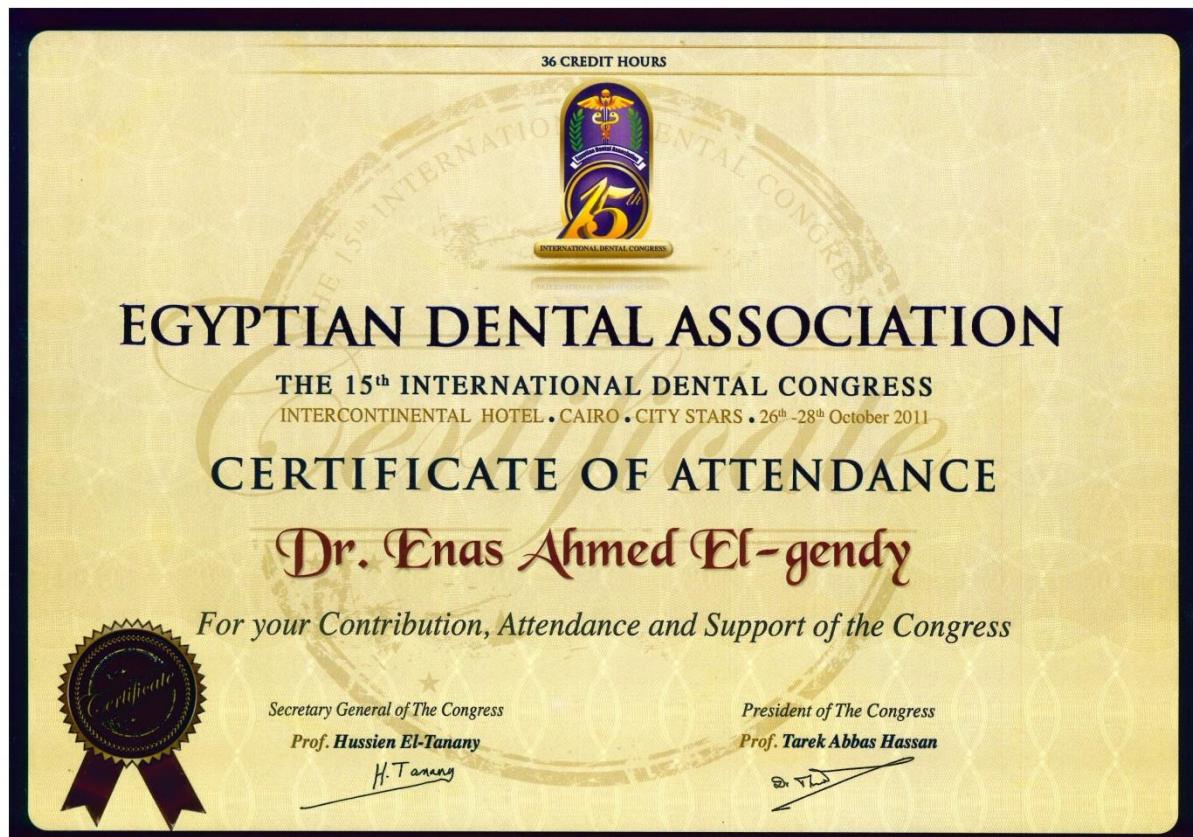
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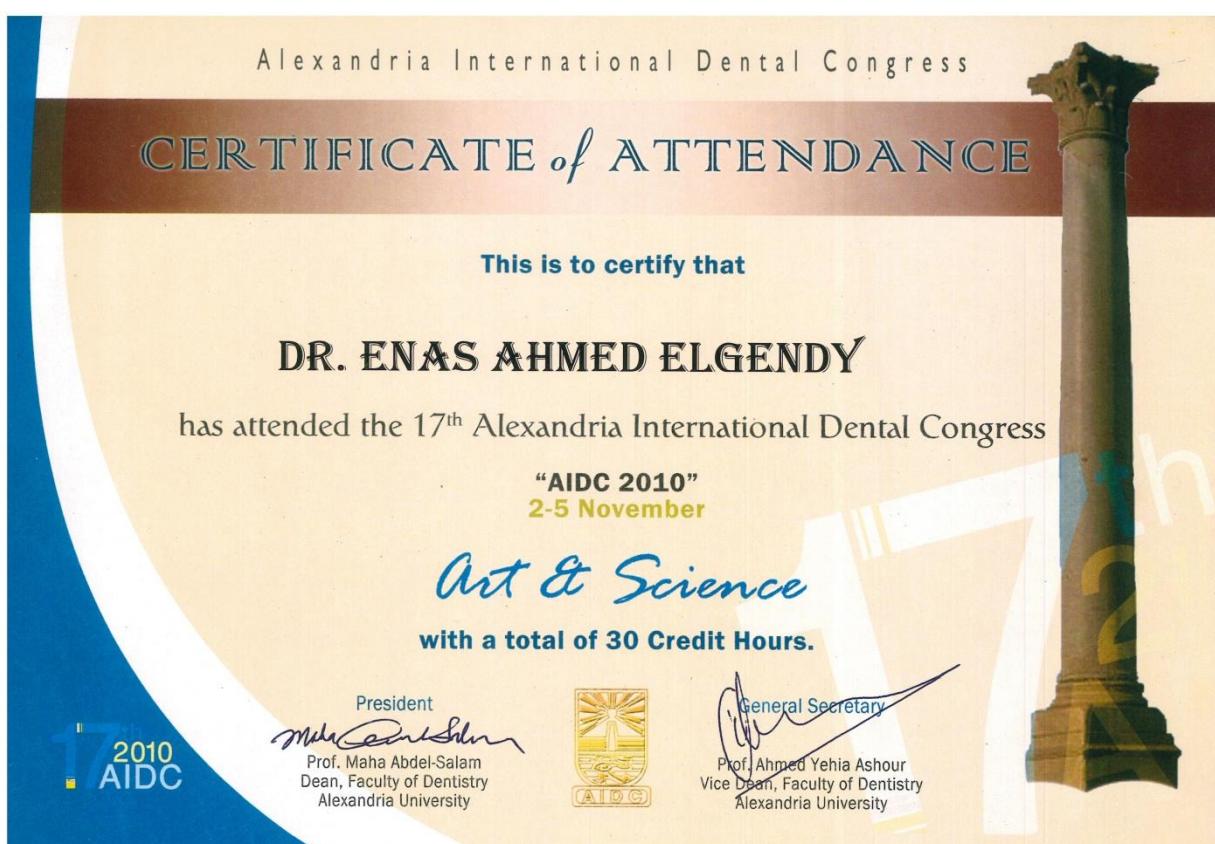
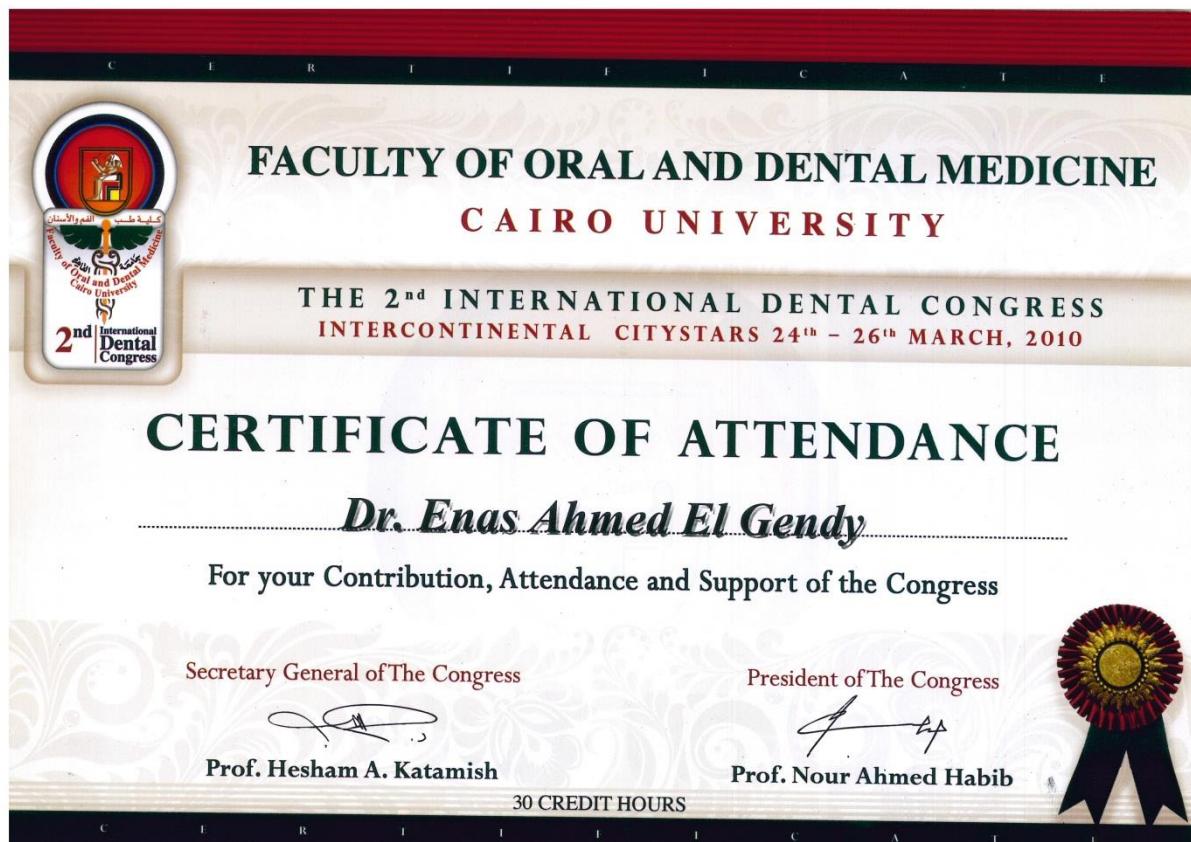
is member of the German Society of

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January - December 2011

*Dr. h.c.*  
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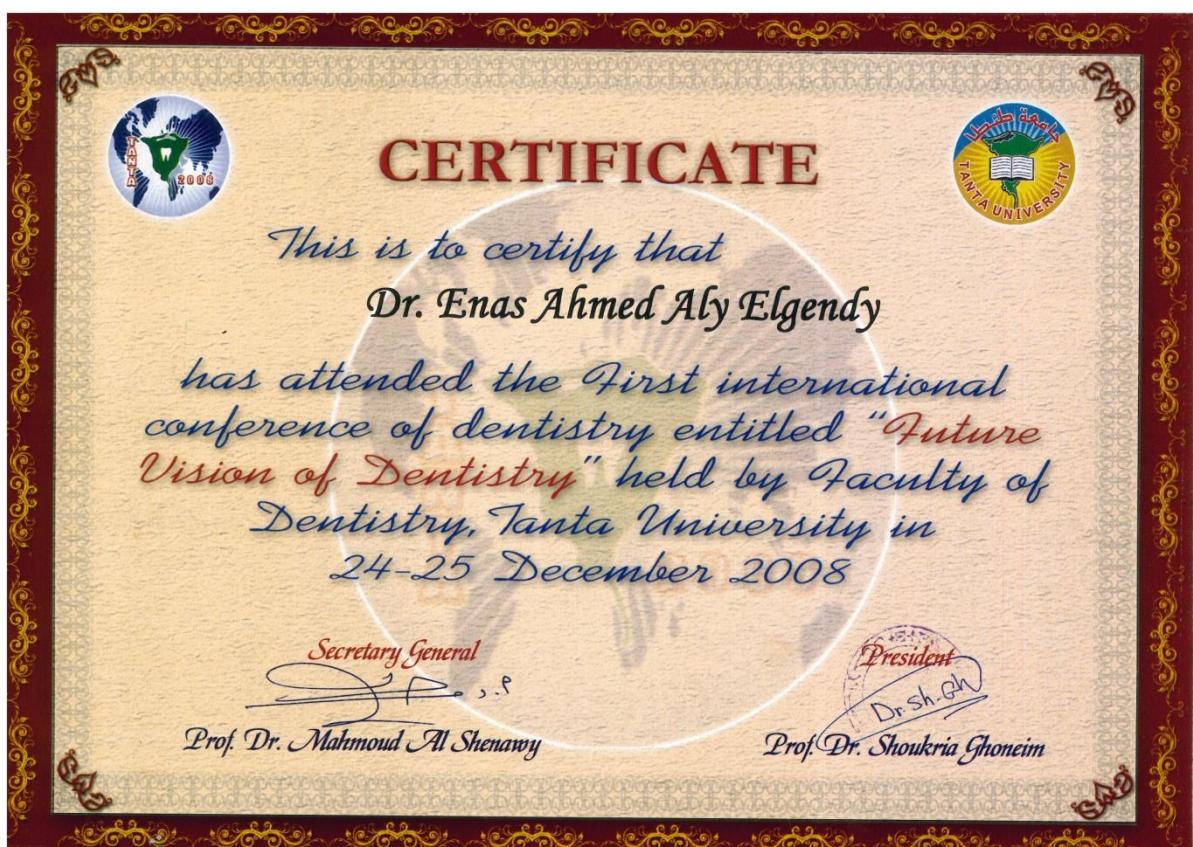
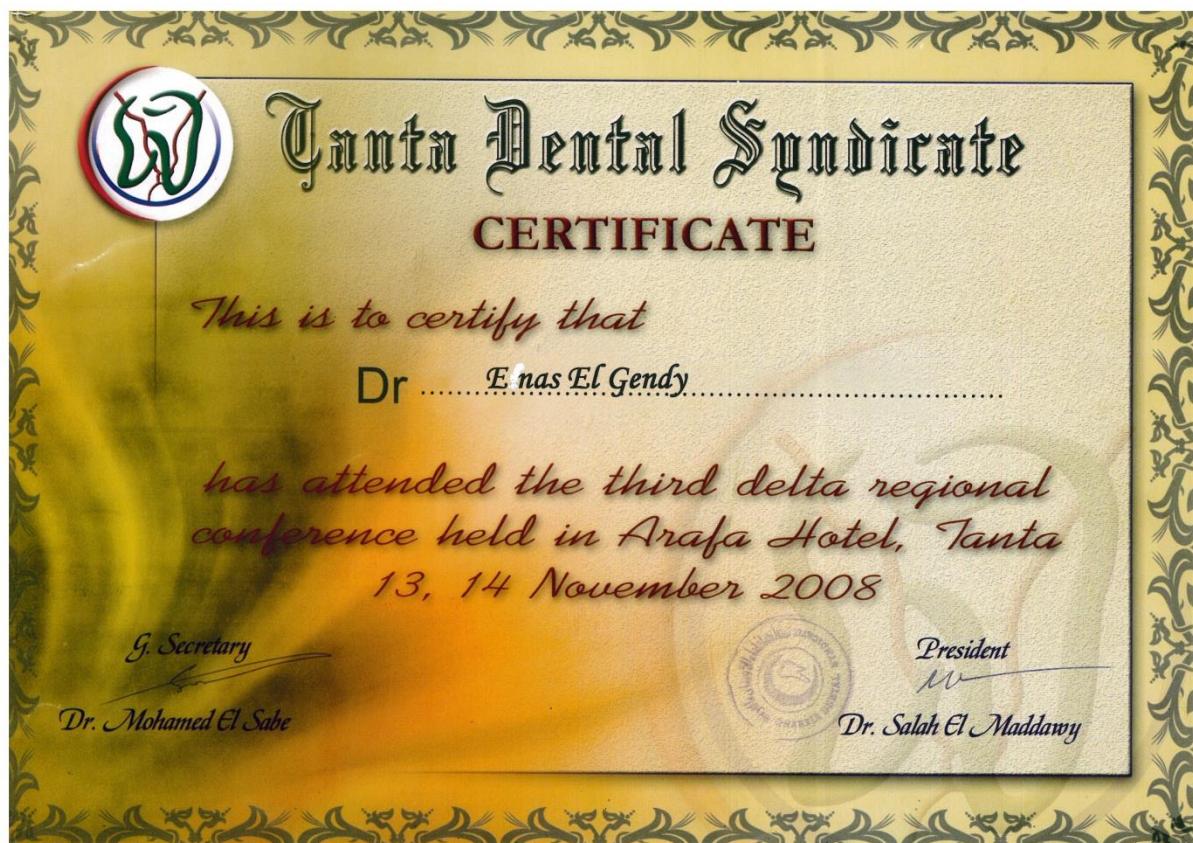
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Implant Microdent system

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*Location of course: Continuing Dental Education & Training Center,  
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*Name of Participant:*

***Enas Ahmed Elgendi***

*Date of Birth: 1/12/1972 Sex: female Nationality: Egyptian*

*University of graduation: Cairo University*

*Number of credit hours awarded: 15 CREDIT HOURS*

*(9 THEORETICAL, 6 CLINICAL)*

*The educational methods used: lectures, hands on internet searching, reference  
management and interactive discussion.*

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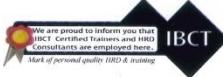
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(مدرس بكلية طب أسنان )

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ضمن برنامج مهارات أعضاء هيئة التدريس والهيئة المعاونة

خلال شهر إبريل / مايو ٢٠١١ (١٥ ساعة)

جامعة ٦ أكتوبر  
رئيس الجامعة  
د/ علاء الدين العيسوي

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May 2014 - June 2015



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June 2015

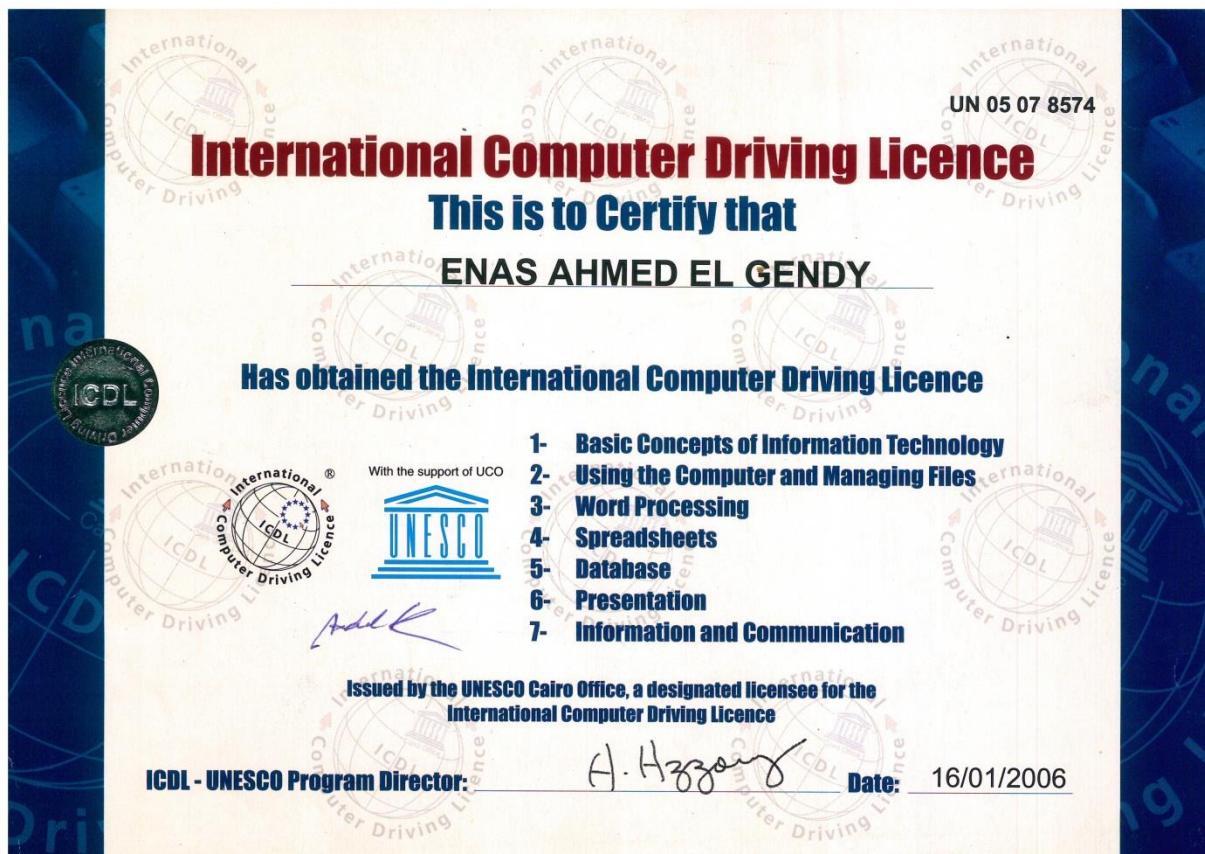
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8508	أ.د/ أحمد راغب أحمد زاهر	مُنْسِرَة	طب الأسنان	طب الأسنان	طب وجراحة الفم	ببولوجيا الفم	٩٠	٢٠٠٩/٠٩/٢٨	٢٠١٩ - ٢٠٢٢	٢٠٠٩/٠٩/٢٨
24797	أ.د/ أحمد محمود على حلاوة	عن شمس	طب الأسنان	طب الأسنان	طب وجراحة الفم والأسنان	ببولوجيا الفم		٢٠١٦/٠٣/٢٨	٢٠١٩ - ٢٠٢٢	٢٠١٦/٠٣/٢٨
3985	أ.د/ أمير سعد جرجس	القاهرة	طب الفم والأسنان	طب الفم والأسنان	طب وجراحة الفم والأسنان	ببولوجيا الفم		١٩٩١/١٢/٣١	٢٠١٩ - ٢٠٢٢	١٩٩١/١٢/٣١
3712	أ.د/ أميمة محمد حلى عفيفي	طنطا	طب الأسنان	طب الفم	طب الفم	طب الفم		٢٠٠٠/٠٧/٣٠	٢٠١٩ - ٢٠٢٢	٢٠٠٠/٠٧/٣٠
24692	أ.د/ احمد عبد المجيد مصطفى مهدي	المنيا	طب الأسنان	طب الفم وجراحة اللثة	طب الفم وجراحة اللثة	طب الفم وجراحة اللثة		٢٠١٢/٠٢/٠٩	٢٠١٩ - ٢٠٢٢	٢٠١٢/٠٢/٠٩
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25638	أ.د/ ايناس احمد الجندي	كتف الشيخ	طب الأسنان	طب وجراحة الفم والأسنان	طب وجراحة الفم والأسنان	طب وجراحة الفم		٢٠٢٠/٠٣/٣١	٢٠٢٠ - ٢٠٢٣	٢٠٢٠/٠٣/٣١
20584	أ.د/ حسام احمد محمد قنديل	القاهرة	طب الفم والأسنان	أشعة الفم	أشعة الفم	أشعة الفم		٢٠٠٦/٠٤/٠٦	٢٠٢٠ - ٢٠٢٣	٢٠٠٦/٠٤/٠٦
25596	أ.د/ حسناء فؤاد عبد العزيز ابراهيم	طنطا	طب الأسنان	طب وجراحة الفم والأسنان	طب وجراحة الفم والأسنان	ببولوجيا الفم		٢٠٠٧/٠٣/٢٧	٢٠٢٠ - ٢٠٢٣	٢٠٠٧/٠٣/٢٧
25587	أ.د/ حمدى عبدالمجدى متول عبد العال	طنطا	طب الأسنان	بكالوريوس طب وجراحة الفم والأسنان	بكالوريوس طب وجراحة الفم والأسنان	علم أمراض الفم		٢٠١٨/١١/٢٨	٢٠٢٠ - ٢٠٢٣	٢٠١٨/١١/٢٨

التشكيل طبقاً لموافقة المجلس الأعلى للجامعات بجلسته رقم (١٤٧) بتاريخ ٢٢/٠٢/٢٠٢٠م  
وموافقة المجلس الأعلى للجامعات بجلسته رقم (٧٠٨) بتاريخ ٢٢/٠٢/٢٠٢٠م.

أمين المجلس الأعلى للجامعة

*[Signature]*

بيان المدحومين لفحص الاتصال العلمي لشغف وظائف الأساتذة والأساتذة المساعدين  
الدورة الرابعة عشر (٢٠٢٠-٢٠٢٢)



دراسات طب الأسنان

الرتبة والجنس	الرقم اسم	الاستثنائية	الجامعة	الكلية	التخصص العام	التخصص الدقيق
أ.د/ إيهاب أحمد زاهر	٨٥٠٨	٢٠٠٩/٩	المنصورة	طب الأسنان	طب، وجراحة الفم والأسنان	ببوجها الفم
أ.د/ أيمن سعد جرجس	٣٩٨٥	١٩٩١/١٢	القاهرة	طب، وجراحة الفم والأسنان	طب، وجراحة الفم والأسنان	ببوجها الفم
أ.د/ أميمة محمد حلبي عفيفي	٣٧١٢	٢٠٠٧/٧	طنطا	طب الأسنان	طب، وجراحة الفم والأسنان	طب، الفم وعاجل النساء
أ.د/ إيمان سعيد عبد الحميد إبراهيم	٩٤٢٦	٢٠١١/٣	عين شمس	طب الأسنان	طب الفم والأسنان	ببوجها الفم
أ.د/ المسيد محمد السيد دراز	٣٧٦٢	٢٠٢٢/٤	طنطا	طب الأسنان	طب، وجراحة الفم والأسنان	أمراض الفم
أ.د/ الفت محمد احمد السيد جاب الله	١٠٠٧	٢٠٠٥/٨	طنطا	طب الأسنان	طب، وجراحة الفم والأسنان	ببوجها الفم
أ.د/ أمل محمد عزت عبد الحميد مصطفى	٢٥١٥	٢٠١٩/١١	طنطا	طب، الأسنان	ببوجها الفم	ببوجها الفم
أ.د/ انجي أحمد محمود أحمد	٣٦٧٤	٢٠٢١/١٢	القاهرة	طب، الفم والتشخيص وعاجل النساء	طب، الفم والتشخيص وعاجل النساء	طب، الأسنان
أ.د/ اياس احمد الجندي	٣٥٣٨	٢٠٢٠/٣	كم الشعيب	طب، الأسنان	طب، وجراحة الفم والأسنان	طب، الفم والتشخيص وعاجل النساء

أمين المجلس الأعلى للجامعات

أ.د. / مصطفى رفعت

٧١٤ / ٥٢٣ صدرت في: ٢٣ أبريل، ٢٠٢٤