

## **Conclusion**

- 1- Total salivary glutathione was affected by periodontal disease and smoking.
- 2- Smoking and periodontitis compromised the antioxidant capacity of saliva in systemically healthy patients.
- 3- Saliva is a non invasive promising field that could help in periodontal disease diagnosis and follow up.

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## المخلص العربي

إن مرض التهاب حوالى السن المزمن هو مرض مركب يتضمن تفاعلات معقدة بين البيوفيلم و الإستجابة المناعية الإلتهابية للمضيف مما يؤدي إلى تعديلات لاحقة في العظام وتوازن النسيج الضام.

في السنوات ال 20 الماضية، كان هناك وعيا متزايدا لدور تعاطي التبغ على مدى شدة و انتشار مرض التهاب حوالى السن المزمن، حيث يلبي التدخين غالبية المعايير المعروفة المسببة للمرض.

اللعاب في البشر هو السائل الموجود فى الفم و الذى يمتلك العديد من المهام المعنية في مجال صحة الفم والتوازن مع دور وقائي فعال في الحفاظ على صحة الفم.

و كما يحدث فى مختلف النظم البيولوجية، يشمل نظام مضادات الأوكسدة اللعابية مختلف الجزيئات والانزيمات مثل سوبرأوكسيد الديسموتاز، الكاتالاز، البيروكسيداز الجلوتاثيون وغيرها، والتي يمكن أن تستخدم كمؤشرات حيوية لتشخيص مختلف الأمراض اللثوية.

يعتبر الجلوتاثيون مضاد للأوكسدة منخفض الوزن الجزيئي ، والذي يمكن أن يزيل مباشرة الجذور الحرة أو أن يعمل كركيزة لبيروكسيداز الجلوتاثيون والجلوتاثيون S-ترانسفيراز من خلال إزالة السموم من بيروكسيد الهيدروجين، الهيدروبيروكسيد الدهنى، و المركبات المحبة للإلكترونات.

في هذه الدراسة، نحن نقوم باختبار فرضية أن مستوى الجلوتاثيون اللعابي يكون أعلى في مرضى التهاب حوالى السن المزمن المدخنون بالمقارنة مع غير المدخنون ومجموعة تحت السيطرة، و كذلك مقارنة مستوى الجلوتاثيون اللعابي فى مرضى التهاب حوالى السن المزمن المدخنون و غير المدخنون قبل و بعد التقليل تحت اللثوى.

وقد أجريت هذه الدراسة على مجموعه مكونة من 40 فرد لا يعانون من أية أمراض، و قد تم تقسيمهم الى ثلاث مجموعات. وتألقت المجموعة الأولى من 15 مريضا غير مدخنين يعانون من التهاب حوالى السن المزمن بدرجة متوسطة إلى شديدة.

وتألفت المجموعة الثانية من 15 مريضاً يعانون من التهاب حوالى السن المزمن بدرجة متوسطة إلى شديدة و يقومون بالتدخين وقال ( Buduneli(2006) وآخرون, يتم تعريف المدخنين بأولئك الذين يدخنون < 10 سجائر في اليوم لمدة أكثر من 5 سنوات.

وقد خضعت هاتين المجموعتين إلى الفحص السريري و الإشعاعى و المخبرى قبل أن يتم علاجهم بالتقليل تحت اللثوى فى 3-4 جلسات و تعاد هذه الفحوصات بعد 2 و 4 أشهر من العلاج اللثوى غير الجراحى.

و كانت المجموعة الثالثة (مجموعة تحت السيطرة) مكونة من 10 أفراد غير مدخنين و لا يعانون من أى أمراض لثوية. تخضع هذه المجموعة أيضاً إلى الفحص السريري و الإشعاعى و المخبرى.

و قد تم قياس مستوى الجلوتاثيون اللعابى للمجموعات الثلاثة قبل و بعد العلاج باستخدام kinetic enzymatic recycling assay.

فى هذه الدراسة كان متوسط عمر المرضى فى مجموعة تحت السيطرة هو 30.3 (3.6) عاماً, و كان متوسط أوزانهم 68.73 (13.01) كجم, متوسط الأطوال 163.06 (11.45) سم, و متوسط معامل كتلة الجسم 25.85 (3.71) كجم/م<sup>2</sup>.

و كانت مجموعة مرضى التهاب حوالى السن المزمن مكونة من 30 مريضاً متوسط أعمارهم هو 40.6 (10.43) عاماً, متوسط أوزانهم 73.46 (13.4) كجم, متوسط الأطوال 164.46 (9.1) سم, و متوسط معامل كتلة الجسم 27.24 (3.11) كجم/م<sup>2</sup>.

و كانت النتائج المخبرية لمستوى الجلوتاثيون اللعابى كالتالى:

مجموعة تحت السيطرة:  $465 \pm 2.39$ .

مجموعة مرضى التهاب حوالى السن المزمن:  $1,9 \pm 6,5$

بالمقارنة بين المجموعتين تبين أن هناك فرق مهم ( $P \leq 0.05$ )

عند مقارنة مستوى الجلوتاثيون اللعابي بين المجموعتين (المدخنون و غير المدخنون) بواسطة اختبار T و جدنا أن هنالك فرق بسيط بين المجموعتين. و لكن عند مقارنة النتائج المخبرية بعد 4 أشهر من العلاج كان هناك فرق مهم بين المجموعتين ( $P \leq 0.001$ )

و نظرا لسهولة تجميع اللعاب؛ فإن قياس مجموع مستويات القدرة المضادة للأكسدة اللعابية قد تكون مفيدة في تحديد المرضى المعرضين لخطر فقدان الأسنان. علاوة على ذلك، فإن تحليل اللعاب كوسيلة لتشخيص أمراض اللثة قد تكون وسيلة فعالة من حيث التكلفة لفحص عدد كبير من السكان. علاوة على ذلك، هناك حاجة لدراسات تتضمن مجموعة أكبر من الأفراد لتأكيد هذه النتائج.

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حوالى السن المزمن المدخنون قبل و بعد التقليل تحت  
الثوى

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