

RECOMMENDATIONS

The adipokine (leptin) should be taken in consideration as a part of the assessment of COPD inflammatory status as well as the nutritional state of patients with COPD.

More studies are recommended to confirm leptin role in cachectic patients with COPD and also to detect its role in local airway inflammation in patients with COPD.

Further studies are needed to investigate the controversial data regarding relation of leptin to functional and severity parameters in stable COPD.

Future work is needed to determine whether therapeutic implications targeting leptin in COPD disease can improve the health status and outcomes of COPD patients, which may then open a novel approach to combat morbidity and mortality in COPD.

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الملخص العربي

مرض الانسداد الرئوي المزمن هو سبب بارز ومتزايد للمراضة والوفيات في جميع أنحاء العالم، ويتميز بالمحدودية في تدفق الهواء والتي غالبا ما تكون متصاعدة، و مصاحبة باستجابة التهابية مزمنة متزايدة في ممرات الهواء والرئة للجزيئات أو الغازات الضارة. علاوة على ذلك، يضيف عدم التجانس السريري والوظيفي للانسداد الرئوي المزمن بالإضافة الى التأثيرات خارج الرئة المتعددة والحالات المرضية المصاحبة الى الزيادة في المراضة والوفيات.

يحتل الالتهاب دورا رئيسا في الآلية المرضية لمرض الانسداد الرئوي المزمن. بالإضافة الى الالتهاب الرئوي الموضعي، يضيف الالتهاب العام إلى تعقيد المرض، ويتميز بزيادة المستويات السارية للخلايا الالتهابية، والسيتوكينات وبروتينات المرحلة الحادة والتي تحدث في المرض المستقر وأثناء التفاقمات. تفاقمات الانسداد الرئوي المزمن تكون مصحوبة بتدهور في وظيفة الرئة، انخفاض نوعية الحياة المرتبطة بالصحة ورفع مستوى الالتهاب العام ولها تأثير كبير على البقاء على قيد الحياة.

تم إدخال مؤشر "بود" بمثابة مؤشر مركب لديه القدرة على تقييم الانسداد الرئوي بشكل أكثر شمولاً، مما يعكس ليس فقط القصور في وظائف الرئة، ولكن أيضا العواقب العامة للمرض، تطور المرض والوفيات.

الليبتين، اكتشف في البداية باعتباره أديبوكين يلعب دورا هاما في تنظيم توازن الطاقة، يبرز كسيتوكاين عديد المظاهر مشترك في استعداء، تفعيل وبقاء الخلايا التهابية، و قد أظهرت الدراسات المختلفة دورا متماميا لليبتين في مرضى السدة الرئوية المزمنة.

هدفت الدراسة الحالية للتحقيق في دور التهابي محتمل لليبتين في مرضى السدة الرئوية المزمنة خلال الحالة المستقرة وكذلك التفاقمات وتقييم علاقاته بجوانب المرض المختلفة في المرض المستقر وخلال التفاقم. وقد تحقق ذلك من خلال مقارنة مستويات الليبتين في مرضى السدة الرئوية المزمنة المستقرة، و مرضى أثناء التفاقمات ومجموعة اصحاء ضابطة، وتقييم علاقة الليبتين مع علامات متعددة للمرض بما في ذلك البروتين المتفاعل سي و مؤشر "بود".

التحق بهذه الدراسة اربعون مريضا يعانون من هذا المرض وتم تقسيمهم إلى عشرين مريضا يعانون من مرض مستقر وعشرين مريضا خلال التفاقم. وتمت مقارنة النتائج مقابل خمسة وعشرين فردا اصحاء مطابقين في السن. وكان جميع المرضى ذكورا. تم استبعاد المرضى ذوي مؤشر كتلة الجسم يتجاوز الثلاثين كجم/متر² والذين يعانون من أمراض مصاحبة قد تؤثر على هرمون الليبتين مثل متلازمة التمثيل الغذائي.

تم تقييم مستوى الليبتين الصائم في البلازما وعلامة الالتهاب البروتين المتفاعل سي في جميع المجموعات. تعرض المرضى لتقييم وظائف الرئة، وتقييم الخطورة وفقا لمعايير المبادرة العالمية لمرض الانسداد الرئوي المزمن "جولد" المرتكزه على حجم الزفير القسري المتوقع في الثانية الاولى، تقييم السدة الرئوية المركب و تقييم مؤشر "بود". أيضا تم القيام بالفحوص المختبرية الروتينية وعمل أشعة عادية للصدر لجميع المرضى.

أظهرت النتائج وجود مستوى أعلى ذا دلالة احصائية لهرمون الليبتين خلال تفاقم مرض الانسداد الرئوي المزمن من كل المرضى المستقرين والمجموعة الضابطة. كما كانت مستويات بروتين سي التفاعلي مرتفعة وذات دلالة احصائية خلال التفاقم مما كانت عليه في المجموعتين الأخيرتين. كانت هناك علاقة إيجابية ذات دلالة إحصائية بين مستوى الليبتين و علامة الالتهاب البروتين التفاعلي سي في مجموعة التفاقم، وكذلك في المجموعة المستقرة. اقترحت النتائج دورا لليبتين خلال التفاقم فضلا عن الحالة المستقرة باعتباره علامة التهابية متعلقة بالحالة الالتهابية العامة التي تميز مرض الانسداد الرئوي المزمن، مع مستوى أعلى في المرض المستقر من المجموعة الضابطة ومستويات أعلى بكثير خلال التفاقم.

في المرضى الذين يعانون من تفاقم مرض الانسداد الرئوي المزمن، أظهرت مستويات هرمون الليبتين علاقات إيجابية مع عدد من معايير الخطورة بما في ذلك تقييم الخطورة بمراحل المبادرة العالمية لمرض الانسداد الرئوي المزمن "جولد" المرتكزة على أساس حجم الزفير القسري المتوقع في الثانية الاولى ومع تقييم السدة الرئوية المركب وكذلك نتائج تقييم مؤشر "بود"، وأظهر الليبتين أيضا وجود علاقة إيجابية مع مجموع نقاط ضيق التنفس بحسب مقياس مجلس

البحوث الطبية المعدل. كانت هناك ارتباطات سلبية ذات دلالة احصائية مع حجم الزفير القسري المتوقع في الثانية الاولى ونتائج اختبار المشي لست دقائق. تشير النتائج الإجمالية لوجود صلة بين مستوى أعلى للبيتين وتدهور الحالة الوظيفية مع خطورة أعلى وارتفاع معدل الوفيات أثناء التفاقم.

أظهر المرضى الذين يعانون من مرض الانسداد الرئوي المزمن المستقر وجود علاقة إيجابية بين قيم مؤشر كتلة الجسم ومستويات هرمون الليبتين، والذي ظهر أيضا في المجموعة الضابطة. ومع ذلك لوحظ عدم وجود ارتباط بين مؤشر كتلة الجسم والبيتين في مجموعة التفاقم، والذي يمكن أن يعزى إلى زيادة مستوى هرمون الليبتين خلال التفاقم، مما يقترح إلى وجود صلة بين مستويات أعلى من هرمون الليبتين وارتفاع مستوى الالتهاب العام خلال التفاقم. كما يرتبط هرمون الليبتين في المقام الأول بالمعايير الغذائية كمؤشر كتلة الجسم وكتلة الدهون وتبين أن مستوياته تكون أقل لدى مرضى الهزال، ربما يدل الحفاظ على الارتباط مع مؤشر كتلة الجسم في مرضى الحالة المستقرة بالإضافة إلى مستوى أعلى للبيتين من المجموعة الضابطة على قدرة المريض على الحفاظ على توازن طاقة طبيعي خصوصا مع قيم مؤشر كتلة الجسم المختلفة الملحوظة ضمن مرضى الحالة المستقرة.

في مجموعة مرضى الحالة المستقرة، كانت هناك علاقة سلبية مع تقييم الخطورة بحسب مراحل المبادرة العالمية لمرض الانسداد الرئوي المزمن "جولد" ومع مجموع نقاط مؤشر "بود". والذي كان لصالح خطورة ومعدل وفيات أقل على النقيض من مجموعة مرضى التفاقم.

بالاجمال تقترح الدراسة الحالية أن الحفاظ على مستوى لبيتين أعلى في مرضى السدة الرئوية المستقرين مع الحفاظ على الارتباط مع مؤشر كتلة الجسم يقترح الحفاظ على مسارات الاشارات الطبيعي للبيتين وقدرة هؤلاء المرضى على الحفاظ على توازن الطاقة الطبيعي والحالة الغذائية، والتي بشكل اضافي عكست حالة عامة أفضل ومعدل وفيات أقل، كما هو مبين في العلاقة العكسية بين مستوى الليبتين وتقييم الخطورة بمراحل "جولد" ومؤشر "بود" في مرضى السدة الرئوية المزمنة المستقرة.

أظهر البروتين التفاعلي سى وجود علاقة إيجابية ذات دلالة احصائية في مجموعة المرض المتفاقم مع مؤشر "بود" وارتبط سلبيا مع حجم الزفير القسري المتوقع في الثانية الاولى، مما يدل على العلاقة بين الالتهاب العام الزائد خلال التفاقم وانخفاض في وظيفة الرئة وزيادة شدة المرض بشكل عام والوفيات. في كلا المجموعتين، ارتبط البروتين التفاعلي سى سلبا مع نتائج اختبار المشي لست دقائق مما يدل على علاقته بالحالة الوظيفية لمرضى السدة الرئوية المزمنة.

أظهرت نتائج مؤشر بود وجود علاقة إيجابية مع تقييم الخطورة بحسب مراحل ال "جولد" المرتكز على حجم الزفير القسري المتوقع في الثانية الاولى ومع تقييم السدة الرئوية المركب في كلا المجموعتين. أظهر مؤشر "بود" وجود علاقة إيجابية مع البروتين التفاعلي سى خلال التفاقم. عكست النتائج قدرته كمؤشر مركب متعدد الأبعاد على عكس تعقيد وعدم تجانس هذا المرض، بما في ذلك الالتهاب العام، الحالة الوظيفية وشدة المرض بشكل عام.



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اللبتين في مرض الانسداد الرئوي المزمن: الارتباط بين التفاقم، البروتين المتفاعل سى ومؤشر بود

رسالة مقدمة

لقسم الأمراض الصدرية - كلية الطب - جامعة الإسكندرية
ضمن متطلبات درجة

الماجستير

فى

الأمراض الصدرية

من

أيمن السيد عبدالعزيز السعدنى

بكالوريوس الطب والجراحة - الإسكندرية، ٢٠٠٥

كلية الطب، جامعة الإسكندرية

[٢٠١٥ / ١]



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**اللبتين فى مرض الانسداد الرئوى المزمن: الارتباط بين التفاقم، البروتين المتفاعل
سى ومؤشر بود**

رسالة مقدمة من

أيمن السيد عبدالعزيز السعدنى

للحصول على درجة

الماجستير

فى

الأمراض الصدرية

التوقيع

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