

BIBLIOGRAFÍA CLÍNICA

SOBRE INDICACIONES TERAPÉUTICAS



**STRAUMANN®
EMDOGAIN**

COMMITTED TO
SIMPLY DOING MORE
FOR DENTAL PROFESSIONALS

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1 PRINCIPIOS BÁSICOS DE LA REGENERACIÓN PERIODONTAL CON PROTEÍNAS DE LA MATRIZ DEL ESMALTE

El principal objetivo del tratamiento reconstructivo periodontal es salvar los dientes. La mejor forma de lograrlo es la regeneración de un soporte funcional pleno.

Las proteínas de la matriz del esmalte son responsables del desarrollo del cemento y el ligamento periodontal en la fase de desarrollo del diente⁸. Al aplicarlas a la superficie radicular limpia del diente con enfermedad periodontal, el periodonto – que incluye el cemento, el ligamento periodontal y el hueso alveolar– es regenerado^{1, 2, 3, 4, 5, 105} imitando los procesos biológicos del desarrollo natural del diente^{13, 14}.



Straumann® Emdogain se distribuye uniformemente y se precipita sobre la superficie radicular para formar una matriz extracelular.



Straumann® Emdogain estimula la atracción y proliferación de células mesenquimales desde la parte sana del periodonto.



Se segregan citoquinas naturales y específicas, así como sustancias auto-crinas, lo que promueve la proliferación necesaria.

Straumann® Emdogain está formado por una mezcla de proteínas de la matriz del esmalte y sus derivados^{6, 9} (EMD) con alginato de propilenglicol (PGA) como portador. La proteína más prevalente –la amelogenina– y sus derivados pueden ser también el factor más importante en la actividad regenerativa de EMD.⁷



*Atracción y diferenciación a cemento-
blastos, que comienzan con la formación
de la matriz de cemento donde se fijarán
las fibras periodontales.*



*La capa de cemento de nueva formación
aumenta de grosor. Las fibras de ligamento
periodontal se anclan a la superficie
radicular.*



*En unos meses, el defecto se rellena con
tejido periodontal de nueva formación.*



*Crece nuevo hueso alveolar sobre la capa
de cemento y en el hueco del defecto.*



*Straumann® Emdogain regenera la
compleja estructura dental del periodonto,
estableciendo un nuevo soporte funcional.*

Cuando se aplica Straumann® Emdogain se precipitan proteínas EMD desde el PGA portador sobre la superficie radicular. Este proceso de precipitación tiene lugar inmediatamente debido al aumento del pH y de la temperatura, y las proteínas EMD forman una matriz extracelular sobre la superficie radicular ^{12, 14}. Esta matriz influye en la fijación ¹¹ y proliferación ¹⁰ celulares y ejerce un papel mediador en la formación de cemento sobre la raíz, lo que proporciona una base para todos los tejidos necesarios asociados a un verdadero soporte funcional.

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2 STRAUMANN® EMDOGAIN EN DEFECTOS INTRAÓSEOS

El objetivo último del tratamiento periodontal es la conservación de los dientes. Si bien el desbridamiento con colgajo abierto (OFD por sus siglas inglesas) repara el defecto periodontal, con el consiguiente aumento de la tasa de supervivencia, el uso adicional de Straumann® Emdogain regenera el tejido periodontal y mejora significativamente el resultado clínico^{15, 16, 17, 18}. El beneficio clínico del procedimiento reside en la estabilidad a largo plazo del tejido periodontal regenerado, que se refleja en estudios^{19, 31, 36, 62} realizados durante un periodo de hasta 9 años³¹.

El uso de Straumann® Emdogain mejora significativamente varios parámetros clínicos en comparación con el empleo de OFD únicamente: reducción de la profundidad de sondaje (PPD)^{19, 20, 21, 22, 23, 24, 25, 27, 28, 29}, nivel de soporte clínico (CAL)^{19, 20, 21, 22, 23, 24, 25, 27, 28, 29}, sangrado al sondaje (BP)²⁸, y nivel de rellenado de hueso, medido como densidad ósea radiográfica^{19, 28, 29, 94} o en el momento de la reintervención^{27, 36}. Además, también se ha observado una mejora en la capacidad masticatoria de los pacientes²¹. La probabilidad de alcanzar una mejora significativa de los resultados clínicos demostró duplicarse²⁵ mediante Straumann® Emdogain. Numerosos casos clínicos³¹⁻⁶¹, que incluyen datos histológicos^{37, 54, 55, 75} apoyan estas conclusiones. Factores clínicos como el ángulo del defecto³⁹, el tabaquismo, la higiene oral y la edad⁷¹ influyen en el resultado.

Straumann® Emdogain es fácil de usar y seguro. En aplicaciones únicas o múltiples en combinación con cirugía periodontal ofrece la flexibilidad de tratar zonas difíciles.^{30, 38, 53}

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2.4 Straumann® Emdogain y la regeneración tisular guiada (GTR)

Las comparaciones directas entre la GTR y Straumann® Emdogain en defectos intraóseos demuestran que Straumann® Emdogain da lugar a una tasa mucho menor de complicaciones y morbilidad.^{62, 64, 67, 72} Los resultados clínicos con Straumann® Emdogain son al menos equivalentes^{62, 65, 68, 75} o mejores¹⁸. La estabilidad a largo plazo de los beneficios clínicos en comparación directa con la GTR ha sido objeto de seguimiento hasta un máximo de 8 años⁶². El uso adicional de una membrana en el tratamiento regenerador con Straumann® Emdogain no mejora el resultado, sino que aumenta las molestias posoperatorias del paciente⁶³.

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3 STRAUMANN® EMDOGAIN EN DEFECTOS DE FURCACIÓN

En el tratamiento quirúrgico de la furcación de clase II, Straumann® Emdogain lleva a una regeneración significativa de las lesiones de furcación^{72,74}. Resultados de ensayos clínicos aleatorizados que comparan Straumann® Emdogain con una membrana reabsorbible en el tratamiento de furcaciones de clase II han demostrado una reducción significativa de la profundidad horizontal de furcación. Clínicamente, el tratamiento con Straumann® Emdogain redujo el 78% de los defectos. De ellos, la reducción fue completa en un 18%. En el tratamiento con membrana sólo pudo observarse una reducción de la furcación en el 67% de los defectos, y sólo fue completa en el 7% de éstos. Resultó evidente una menor incidencia de complicaciones posoperatorias tras el tratamiento con Straumann® Emdogain en comparación con la GTR. Al cabo de 1 semana de la operación, el 62% de los pacientes tratados con Straumann® Emdogain no presentaban dolor, frente a solo un 12% de los tratados con GTR. Además, un 44% no mostraba inflamación, frente a un 6% en el grupo de control con GTR^{72,73}. Además, en pacientes con factores limitantes como edad o mala higiene oral, el tratamiento de los defectos de furcación con Straumann® Emdogain resultó ser superior a la GTR⁷¹.

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4 STRAUMANN® EMDOGAIN EN DEFECTOS DE RECESIÓN

El tratamiento de superficies radiculares expuestas es una cuestión cada vez más importante. Esto se ve impulsado por el aumento de las exigencias estéticas de los pacientes.

Para el paciente y el profesional, la estabilidad a largo plazo de la cobertura del defecto es un criterio riguroso de éxito. Straumann® Emdogain se ha utilizado con éxito para mejorar los parámetros clínicos de la técnica de colgajo coronal avanzado (CAF)⁸⁷. En superficies radiculares anteriormente expuestas tratadas con CAF, la adición de Straumann® Emdogain mejora significativamente los parámetros clínicos, incluidas la cobertura de la raíz^{77, 80, 83, 84, 85}, la calidad y cantidad de tejido (p.ej. tejido queratinizado^{76, 77, 80, 83, 84, 85, 91}) y la estabilidad a largo plazo⁸¹ después de intervenciones de cobertura de la recesión.

La combinación de CAF con Straumann® Emdogain muestra una cobertura completa de la raíz en un 89,5% de los casos frente a un 79% al utilizar una combinación de CAF con injerto de tejido conjuntivo (CTG)⁸⁷. La técnica combinada con Straumann® Emdogain presenta menos complicaciones y es menos dolorosa para el paciente^{87, 85} al evitar una segunda herida quirúrgica. También se han obtenido pruebas histológicas de la regeneración periodontal, con nuevo cemento, nuevo hueso y fibras de tejido conjuntivo^{92, 88} en el tratamiento combinado de CAF y Straumann® Emdogain.

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5 STRAUMANN® EMDOGAIN CON MATERIAL PARA INJERTO ÓSEO

En el tratamiento de defectos intraóseos amplios, ocasionalmente se considera la posibilidad de proporcionar soporte mecánico a los tejidos blandos. Algunos profesionales clínicos han referido el uso de Straumann® Emdogain en combinación con diferentes materiales sustitutivos del hueso para ofrecer apoyo estructural a los tejidos blandos en defectos grandes⁹⁴⁻¹²⁰. Straumann® Emdogain PLUS combina las propiedades regeneradoras de Straumann® Emdogain con el apoyo estructural del material osteoconductor Straumann® BoneCeramic.

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