A COLLAGEN-HYDROXYAPATITE DEVICE FOR NON-SURGICAL PERIODONTAL TREATMENT

FIELD OF THE INVENTION

[001] This invention provides a non-surgical method for treating periodontitis comprising administering an article into a periodontal pocket, where the article comprises crosslinked collagen and hydroxyapatite. This invention also provides articles to be used within these methods.

BACKGROUND OF THE INVENTION

[002] Periodontitis is a disease where the periodontal tissue is chronically infected, continuously receding and exposing the root surface to the oral environment, frequently forming a pocket that might be infected. This can cause loosening and finally loss of the tooth and its supporting bone. Periodontal treatment is often aimed at debridement of the root surface and attempting to decrease the pocket depth via reattachment to the root surface or reduction of the non-attached gingival tissue.

[003] Periodontal treatment usually begins with non-surgical debridement (scaling and root planning) followed by meticulous maintenance (both professional and patient's own oral hygiene measures). When this is not sufficient and further attachment loss is detected, resective or regenerative surgical procedures are employed in an attempt to stop the disease progression and even achieve regeneration of lost periodontal tissues.

[004] Accordingly, there is an unmet need for alternative, minimally invasive, safer, less pain-causing and easy-to-perform methods of treating periodontitis.

[005] This invention provides a non-surgical method for treating periodontitis comprising administering an article into a periodontal pocket, where the article comprises crosslinked collagen and hydroxyapatite.

SUMMARY

[005a] In a first aspect, the present disclosure refers to a use of ~~an~~ a solid article in the manufacture of a medicament for treating periodontitis non-surgically, wherein the medicament is to be administered into a periodontal pocket, ~~and~~ the solid article comprises a sugar crosslinked collagen and hydroxyapatite; and wherein the solid article is compressed in a force of between 0.005 and 10 ton-force.

[006] In one example, this present disclosure provides a non-surgical method for treating periodontitis comprising administering an article into a periodontal pocket, where the article comprises

crosslinked collagen and hydroxyapatite. In another embodiment, the method leads to reduction of the periodontal pocket depth.

CLAIMS

What is claimed is:

1. Use of ~~an~~ a solid article in the manufacture of a medicament for treating periodontitis non-surgically, wherein the medicament is to be administered into a periodontal pocket, ~~and~~ the solid article comprises a sugar crosslinked collagen and hydroxyapatite; and wherein the solid article is compressed in a force of between 0.005 and 10 ton-force.
2. The use of claim 1, wherein the solid article is compressed in a force of between 0.005 and 0.2 ton-force.
3. The use of claim 1, wherein the solid article is compressed in a force of between 2 and 5 ton-force.
4. The use according to any one of the preceding claims, wherein the solid article has a porosity of between 40-50%.
5. The use according to any one of the preceding claims, wherein the concentration of the sugar-cross-linked collagen is between 20 to 95 w/w %.
6. The use according to any one of the preceding claims, wherein the weight ratio of collagen to hydroxyapatite is between 95:5 and 20:80.
7. The use as claimed in claim 6, wherein the weight ratio is 70:30.

~~2.~~8.The use according to any one of the preceding claims~~of claim 1~~, wherein the periodontal pocket is infected.

~~3.~~9.The use according to any one of claims 1-7~~of claim 1~~, wherein the periodontal pocket is not infected.

~~4.~~10. The use according to any one of the preceding claims, wherein the medicament leads to reduction of the periodontal pocket depth.

~~5.~~11. The use according to any one of the preceding claims, where the use does not include administration of an additional pharmaceutically active agent.

~~6.~~12. The use according to any one of claims 1-~~4~~10, wherein at least one pharmaceutically active agent selected from the group consisting of: antibacterial agents, antifungal agents, antiseptic agents, anti-inflammatory agents, antibiotic agents, vitamins and vitamers and any combination thereof is to be further administered.

~~7.~~13. The use of claim ~~6~~12, wherein the pharmaceutically active agent is an antibiotic agent or an antiseptic agent.

~~8.~~14. The use according to any one of the preceding claims, wherein the use comprises insertion or pushing of the solid article into the pocket.

~~9.~~15. The use according to any one of the preceding claims, further comprising scaling and root planning, where the scaling and root planning is performed prior to solid article's administration.

~~10. The use according to any one of the preceding claims, wherein the weight ratio of collagen to hydroxyapatite is between 95:5 and 20:80.~~

~~11. The use of claim 9, wherein the weight ratio is 70:30.~~

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