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[Continued on next page]

(54) Title: MENISCAL ROOT ATTACHMENT REPAIR

(57) Abstract: An assembly for meniscal repair (100) including a first tissue fixation member (101) configured to secure a meniscal tissue, a suture anchor (110) having a proximal end (111), a distal end (112), a central axis (150) defined therethrough, an eyelet on the proximal end of the suture anchor, and a textured outer surface, and a first suture (105) configured to be coupled to the first tissue fixation member and configured to be received through the eyelet of the suture anchor.

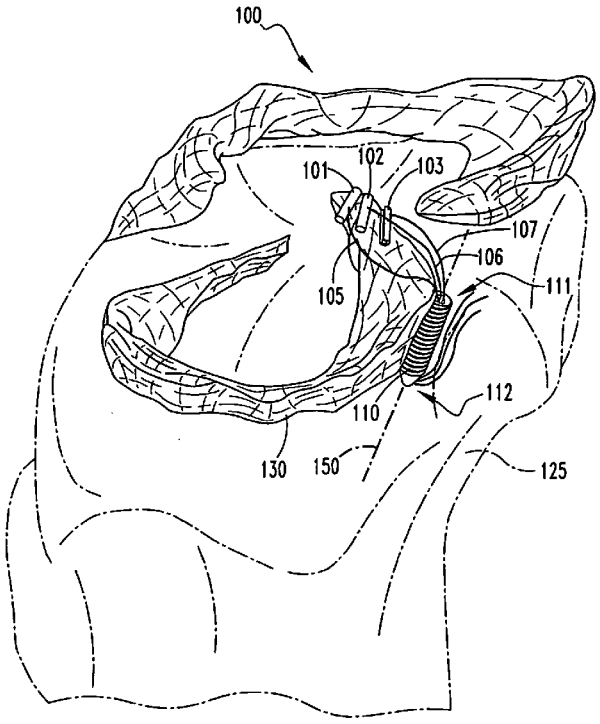

FIG.1C

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MENISCAL ROOT ATTACHMENT REPAIR

[0001] Meniscus repairs have been shown to be effective, especially with tears in the peripheral one-third of the meniscus. Various techniques have evolved to perform this demanding procedure. Initially, open repairs were done that proved the feasibility of the procedure. Initially, open repairs were done that proved the feasibility of the procedure. Subsequently, several techniques involving the arthroscope were developed to assist in these repairs. Most of the techniques have been a variation of the outside-in, or more commonly, the inside-out techniques. These repair procedures have shown to be technically demanding, but more importantly, have inherent risks to the neurovascular structures about the knee. Most of the techniques describe an ancillary incision, either medial and/or lateral, for the purpose of performing the repair and specifically to protect these important structures. In addition, these repairs tether the posterior capsule, causing extension difficulties in the post-operative rehabilitation phase.

[0002] Accordingly, there exists a need for an assembly for meniscal repair that reduces the difficulties and time to repair the meniscus.

[0003] According to one aspect of the present invention, there is provided an assembly for meniscal repair comprising: a first tissue fixation member configured to secure a meniscal tissue; a suture anchor comprising a proximal end, a distal end, and a central axis defined therethrough, an eyelet, and a textured outer surface for anchoring within a bone; and a first suture configured to be coupled to the first tissue fixation member and configured to be received through the eyelet of the suture anchor; wherein the first tissue fixation member is configured so that upon deployment of the first tissue fixation member, the first tissue fixation member is reoriented such that a longitudinal axis of the first tissue fixation member is parallel to a contacting surface of the meniscal tissue.

[0004] According to another aspect of the present invention, there is provided a method for meniscal repair comprising: providing a first tissue fixation member configured to secure a meniscal tissue, a suture anchor having an eyelet, and a first suture; securing the first suture to the first tissue fixation member; securing the first

tissue fixation member to a meniscal tissue threading the first suture through the eyelet of the suture anchor; securing the suture anchor within a bone; and tensioning the first suture within the suture anchor; wherein the first tissue fixation member is configured so that upon deployment of the first tissue fixation member, the first tissue fixation member is reoriented such that a longitudinal axis of the first tissue fixation member is parallel to a contacting surface of the meniscal tissue.

[0005] According to another aspect of the present invention, there is provided a kit for meniscal repair comprising: at least one tissue fixation member configured to securing a meniscal tissue; a suture anchor for anchoring in a bone comprising an eyelet; at least one suture configured to be coupled to the at least one tissue fixation member and configured to be received through the eyelet of the suture anchor; and a delivery device configured to assist with delivery of the at least one tissue fixation member into a body; wherein the first tissue fixation member is configured so that upon deployment of the first tissue fixation member, the first tissue fixation member is reoriented such that a longitudinal axis of the first tissue fixation member is parallel to a contacting surface of the meniscal tissue.

[0006] FIGS. 1A-1C are multiple views of an assembly for meniscal repair in accordance with embodiments disclosed herein.

[0007] The following is directed to various exemplary embodiments of the disclosure. Although one or more of these embodiments may be preferred, the embodiments disclosed should not be interpreted, or otherwise used, as limiting the scope of the disclosure, including the claims. In addition, those having ordinary skill in the art will appreciate that the following description has broad application, and the discussion of any embodiment is meant only to be exemplary of that embodiment, and not intended to suggest that the scope of the disclosure, including the claims, is limited to that embodiment.

[0008] Certain terms are used throughout the following description and claims refer to particular features or components. As those having ordinary skill in the art will appreciate, different persons may refer to the same feature or component by different names. This document does not intend to distinguish between components or features that differ in name but not function. The figures are not necessarily to scale. Certain features and components herein may be shown exaggerated in scale or in somewhat

schematic form and some details of conventional elements may not be shown in interest of clarity and conciseness.

[0009] In the following discussion and in the claims, the terms "including" and "comprising" are used in an open-ended fashion, and thus should be interpreted to mean "including, but not limited to ...." Also, the term "couple" or "couples" is intended to mean either an indirect or direct connection. Thus, if a first component is coupled to a second component, that connection may be through a direct connection, or through an indirect connection via other components, devices, and connections. Further, the terms "axial" and "axially" generally mean along or substantially parallel to a central or longitudinal axis, while the terms "radial" and "radially" generally mean perpendicular to a central, longitudinal axis.

[0010] Referring generally to FIGS. 1A-1C, an assembly for meniscal repair 100, according to embodiments disclosed herein, is shown. In one or more embodiments, the assembly 100 may include a first tissue fixation member 101 configured to secure a meniscal tissue 130, a suture anchor 110 having a proximal end 111, a distal end 112, a central axis 150 defined therethrough, an eyelet (not shown), and a textured outer surface, and a first suture 105 configured to be coupled to the first tissue fixation member 101 and configured to be received through the eyelet of the suture anchor 110.

[0011] In one or more embodiments, the first tissue fixation member 101 may be a substantially rigid, bar or rod-shaped member. Alternatively, in one or more embodiments, the first tissue fixation member 101 may have a curved shape and may be formed from a flexible material, such as a plastic or polymer. In one or more embodiments, the first tissue fixation member 101 may be formed from any biocompatible material known in the art, including plastics, polymers, metals, and any combination thereof. The first tissue fixation member 101 may engage with the meniscal tissue 130 and may be used to secure the meniscal tissue 130, *e.g.*, against a tibia 125.

[0012] In one or more embodiments, the assembly 100 may also include a second tissue fixation member 102 configured to secure the meniscal tissue 130. In one or more embodiments, the second tissue fixation member 102 may be substantially identical to the first tissue fixation member 101. For example, as discussed above, in one or more

embodiments, the second tissue fixation member 102 may be a substantially rigid, bar or rod-shaped member. Alternatively, in one or more embodiments, the second tissue fixation member 102 may have a curved shape and may be formed from a flexible material, such as a plastic or polymer. In one or more embodiments, the second tissue fixation member 102 may be formed from any biocompatible material known in the art, including plastics, polymers, metals, and any combination thereof. The second tissue fixation member 102, like the first tissue fixation member 101, may engage with the meniscal tissue 130 and may be used to secure the meniscal tissue 130, *e.g.*, against a tibia 125. Those having ordinary skill in the art will appreciate that more than two tissue fixation members may be used in the assembly 100 to assist with securing the meniscal tissue 130. For example, three, four, five, or more tissue fixation members, that may be substantially identical to the first tissue fixation member 101 and the second tissue fixation member 102, may be used in the assembly 100 to assist with securing the meniscal tissue 130.

[0013] As shown in FIG. 1A, the first suture 105 is coupled to the first tissue fixation member 101. Further, as shown, a second suture 106 is coupled to the second tissue fixation member 102. In one or more embodiments, each of the first tissue fixation member 101 and the second tissue fixation member 102 may include holes, or notches, formed therethrough, through which each of the first suture 105 and the second suture 106 may be engaged with, or coupled to, the first tissue fixation member 101 and the second tissue fixation member 102, respectively. Those having ordinary skill in the art will appreciate that the first suture 101 and the second suture 102 may be formed from any material known in the art. For example, in one or more embodiments, each of the first suture 101 and the second suture 102 may be formed from a biocompatible polyester or polyester closure tape and may be, for example, a single or double-arm 2-0 braided non-absorbable polyester suture.

[0014] As shown in FIGS. 1B and 1C, the suture anchor 110 includes an eyelet (not shown), in which each of the first suture 105 and the second suture 106 are configured to be received through the eyelet of the suture anchor 110. In one or more embodiments, the eyelet of the suture anchor 110 may be a transverse hole that is located between the proximal end 111 and the distal end 112 of the suture anchor 110,

and may be formed through the suture anchor 110. Further, as shown, the eyelet may be located near the distal end 112 of the suture anchor 110. However, those having ordinary skill in the art will appreciate that the eyelet may be located at any other position on the suture anchor 110, and that the eyelet is not limited to being formed near the distal end 112 of the suture anchor 110. For example, the eyelet may be formed near the proximal end 111 of the suture anchor 110 or through a region of the suture anchor 110 between the proximal end 111 and the distal end 112 of the suture anchor 110. Those having ordinary skill in the art will appreciate that more than one suture anchor 110 may be included in the assembly 100. For example, two, three, or more suture anchors that may be substantially identical to the suture anchor 110 may be included in the assembly 100.

[0015] In one or more embodiments, the textured outer surface of the suture anchor 110 may be formed near the distal end 112 of the suture anchor 110. However, those having ordinary skill in the art will appreciate that the textured outer surface of the suture anchor 110 may be formed any other surface of the suture anchor 110 and that the textured outer surface of the suture anchor 110 is not limited to being formed near the distal end 112 of the suture anchor 110. For example, in one or more embodiments, the textured outer surface of the suture anchor 110 may be formed on the entire outer surface of the suture anchor 110. Alternatively, in one or more embodiments, the textured outer surface of the suture anchor 110 may be formed near the proximal end 111 of the suture anchor.

[0016] Further, in one or more embodiments, the textured outer surface of the suture anchor 110 may be a threaded outer surface. In one or more embodiments, the textured outer surface of the suture anchor 110 may be a threaded outer surface that may be configured to self-tap into a bone, *e.g.*, the tibia 125. For example, as will be discussed below, a hole may be formed into the tibia 125. Subsequently, in one or more embodiments, the suture anchor 110 may be aligned with the hole secured within the tibia 125, such that the threaded outer surface of the suture anchor 110 may engage with, and may form corresponding threads within, the hole formed in the tibia 125.

[0017] Furthermore, in one or more embodiments, the textured outer surface of the suture anchor 110 may be a stepped outer surface. For example, in one or more embodiments,

the outer surface of the suture anchor 110 may include steps, or barbs, that may be configured to reduce the possibility of unwanted removal of the suture anchor 110 from a bone, *e.g.*, the tibia 125. Those having ordinary skill in the art will appreciate that the suture anchor 110 may include any number of steps, or barbs, formed on the outer surface of the suture anchor 110.

[0018] In one or more embodiments, the assembly 100 may also include a fixation plug (not shown) that may be configured to engage with the suture anchor 110. For example, in one or more embodiments, the suture anchor 110 may include a longitudinal hole formed along the central axis 150 of the suture anchor 110 to receive the fixation plug. In one or more embodiments, the fixation plug may be configured to secure at least one suture, *e.g.* the first suture 105 and the second suture 106, within the eyelet of the suture anchor 110. In one or more embodiments, the longitudinal hole formed through the suture anchor 110 along the central axis 150 of the suture anchor 110 may be a threaded hole. For example, in one or more embodiments, the fixation plug may include corresponding threads that may allow the fixation plug to threadably engage with the suture anchor 110, *i.e.*, with the longitudinal hole of the suture anchor 110. As such, in one or more embodiments, the first suture 105 and the second suture 106 may be disposed, or threaded, through the eyelet of the suture anchor 110. Subsequently, in one or more embodiments, the fixation plug may be engaged within the longitudinal hole of the suture anchor 110, which may secure the first suture 105 and the second suture 106 within the eyelet of the suture anchor 110. Those having ordinary skill in the art will appreciate that more than two sutures may be disposed, or threaded, through the eyelet of the suture anchor 110. For example, three, four, five, or more sutures may be threaded through the eyelet of the suture anchor 110, and the fixation plug may be engaged within the longitudinal hole of the suture anchor 110, which may secure any suture disposed through the eyelet of the suture anchor 110 within the suture anchor 110. Further, those having ordinary skill in the art will appreciate that the fixation plug may not necessarily need to have a threaded outer surface in order to engage with the suture anchor 110. For example, in one or more embodiments, an outer diameter of the fixation plug may be substantially equal to, or slightly larger than, the diameter of the longitudinal hole formed in the suture anchor 110. As such, in one or more embodiments, the fixation plug may be secured within, or engaged with, the suture

anchor 110, *i.e.*, with the longitudinal hole of the suture anchor 110, by disposing the fixation plug within the longitudinal hole of the suture anchor 110. In one or more embodiments, frictional forces between the fixation plug and an inner surface of the longitudinal hole of the suture anchor 110 may engage with fixation plug within the longitudinal hole of the suture anchor 110 such that any sutures, *e.g.* the first suture 105 and the second suture 106, that may be disposed through the eyelet may be secured within the suture anchor 110. However, those having ordinary skill in the art will appreciate that a fixation plug may not be necessary in order to secure at least one suture within an eyelet of the suture anchor 110. For example, in one or more embodiments, the eyelet may be formed near the distal end 112 of the suture anchor 110, and the suture anchor 110 may be secured within a bone, *e.g.*, the tibia 125. As such, because the distal end 112 of the suture anchor 110 may be disposed within, and engaged with, the tibia 125, the engagement between the outer surface of the suture anchor 110 and the hole formed in the tibia 125, in which the suture anchor 110 is disposed, may secure at least one suture, *e.g.*, the first suture 105 and the second suture 106, within the eyelet of the suture anchor 110.

[0019] Examples and further description of suture anchors and fixation plugs may be disclosed in co-pending U.S. Application No. 12/259,106, titled "Anchor Assembly" and assigned to the assignee of the present disclosure, and hereby incorporated by reference in its entirety.

[0020] A method for meniscal repair, according to embodiments disclosed herein, may include providing a first tissue fixation member configured to secure a meniscal tissue, a suture anchor having an eyelet, and a first suture, securing the first suture to the first tissue fixation member. The method may also include making a single incision into a skin and forming a portal into a body and forming a hole within the bone, and engaging the first tissue fixation member and a delivery device and disposing the delivery device and the first tissue fixation member through the portal, into the body. Further, in one or more aspects, the method may also include engaging the second tissue fixation member and the delivery device and disposing the delivery device and the second tissue fixation member through the portal, into the body.

[0021] For example, referring to FIG. 1A, the first tissue fixation member 101 and the second tissue fixation member 102 are configured to secure the meniscal tissue 130. As shown, each of the first tissue fixation member 101 and the second tissue fixation member 102 were delivered through the meniscal tissue 130 with a delivery device 109. In one or more embodiments, each of the first tissue fixation member 101 and the second tissue fixation member 102 may be secured to, or engaged with, the delivery device 109. In one or more embodiments, the delivery device 109 may include a cannulated spinal needle and an obturator (not shown), *e.g.*, a deployment rod (not shown). Further, in one or more embodiments, the delivery device 109 may be formed from any substantially rigid or from a flexible, biocompatible material known in the art. For example, the cannulated spinal needle of the delivery device 109 may be formed from biocompatible plastics, polymers, metals, and any combination thereof. In one or more embodiments, the cannulated spinal needle may be a 17 gauge spinal needle. However, those having ordinary skill in the art will appreciate that the cannulated spinal needle may not necessarily need to be a 17 gauge spinal needle.

[0022] Still referring to FIG. 1A, as discussed above, each of the first tissue fixation member 101 and the second tissue fixation member 102 may include holes, or notches, formed therethrough, through which each of the first suture 105 and the second suture 106 may be engaged with, or coupled to, the first tissue fixation member 101 and the second tissue fixation member 102, respectively. As such, according to one or more aspects, once the first suture 105 and the second suture 106 have been coupled to the first tissue fixation member 101 and the second tissue fixation member 102, respectively, each of the first tissue fixation member 101 and the second tissue fixation member 102 may be disposed within the delivery device 109, *e.g.*, within the cannulated spinal needle (not shown).

[0023] Once a single incision into a skin, forming a portal (not shown) into a body, each of the first tissue fixation member 101 and the second tissue fixation member 102 may be disposed through the portal into the body with the delivery device 109. According to one or more aspects, each of the first tissue fixation member 101 and the second tissue fixation member 102 may be engaged with, or secured to, the delivery device by disposing each of the first tissue fixation member 101 and the second tissue fixation

member 102 within the delivery device. In one or more embodiments, an inner diameter of the cannulated spinal needle may be slightly larger than a diameter of the tissue fixation members 101, 102. As such, according to one or more aspects, each of the first tissue fixation member 101 and the second tissue fixation member 102 may be disposed within, and received by, the cannulated spinal needle of the delivery device 109. Further, a distal end of the cannulated spinal needle may be angled, such that the distal end of the cannulated spinal needle is configured to pierce the meniscal tissue 130.

[0024] According to one or more aspects, the cannulated spinal needle of the delivery device 109 may be inserted through the portal, into the body, and may pierce through the meniscal tissue 130. Once the cannulated spinal needle of the delivery device 109 has pierced the meniscal tissue 130, the obturator may be disposed within the cannula of the cannulated spinal needle from a distal end of the cannulated spinal needle, and may force, or push, at least one of the first tissue fixation member 101 and the second tissue fixation member 102 out of the cannulated spinal needle, *i.e.*, deploy at least one of the first tissue fixation member 101 and the second tissue fixation member 102 from the delivery device 109. Upon deployment of at least one of the first tissue fixation member 101 and the second tissue fixation member 102, the first tissue fixation member 101 and the second tissue fixation member 102 may be reoriented such that a longitudinal axis of the first tissue fixation member 101 and the second tissue fixation member 102 may be substantially parallel to a contacting surface of the meniscal tissue 130. In other words, upon deployment of the first tissue fixation member 101 and the second tissue fixation member 102 from the delivery device 109, the first tissue fixation member 101 and the second tissue fixation member 102 may be reoriented to prevent the first tissue fixation member 101 and the second tissue fixation member 102 from being displaced through the hole formed in the meniscal tissue 130 from the piercing of the cannulated spinal needle of the delivery device through the meniscal tissue 130.

[0025] The method may also include securing the first tissue fixation member to a meniscal tissue, threading the first suture through the eyelet of the suture anchor, securing the suture anchor within a bone, and tensioning the first suture within the suture anchor. The method may also include securing a second suture to a second tissue fixation

member, threading the second suture through the eyelet of the suture anchor, and tensioning the second suture within the suture anchor.

[0026] For example, referring to FIG. 1B, each of the first tissue fixation member 101 and the second tissue fixation member 102 are secured to, or are engaged with, the meniscal tissue 130. Further, as shown in FIG. 1B, each of the first suture 105 and the second suture 106, which are coupled to the first tissue fixation member 101 and the second tissue fixation member 102, respectively, may be threaded, or disposed, through the eyelet (not shown) of the suture anchor 110.

[0027] As shown in FIG. 1C, the suture anchor 110 may be secured within the bone, *e.g.*, within the tibia 125. Further, each of the first suture 105 and the second suture 106 may be tensioned within the suture anchor 110 such that the area of the meniscal tissue 130 that is in contact with each of the first tissue fixation member 101 and the second tissue fixation member 102 may be pulled toward the suture anchor 110, *i.e.*, toward the tibia 125. As discussed above, once each of the first suture 105 and the second suture 106 are tensioned, a fixation plug (not shown) may be engaged with the suture anchor to secure any sutures disposed through the eyelet of the suture anchor 110 within the suture anchor 110. Furthermore, as discussed above, in one or more embodiments, three, four, five, or more tissue fixation members, that may be substantially identical to the first tissue fixation member 101 and the second tissue fixation member 102, may be used in the assembly 100 to assist with securing the meniscal tissue 130. For example, as shown in FIG. 1C, a third tissue fixation member 103 may be used in the assembly 100 to assist with securing the meniscal tissue 130 to the tibia 125. As shown, the third tissue fixation member 103 is coupled to a third suture 107, which is also disposed through the eyelet of the suture anchor 110 and is secured within the suture anchor 110.

[0028] The method may also include disengaging the first tissue fixation member from the delivery device and removing the delivery device from the body, and disengaging the second tissue fixation member from the delivery device and removing the delivery device from the body. For example, once all of the fixation members, *e.g.*, the first tissue fixation member 101, the second tissue fixation member 102, and the third fixation member 103, are deployed from the delivery device 109, the delivery device 109 may be removed from the body, through the portal described above.

[0029] According to one or more aspects, the methods described herein may also be used for other surgical procedures pertaining to the meniscus. For example, according to one or more aspects, the methods described herein may be used to secure, specifically, the anterior horn of a meniscus tear. Further, according to one or more aspects, the methods described herein may be used for a meniscal transplant procedure.

[0030] A kit for meniscal repair, according to embodiments disclosed herein, may include at least one tissue fixation member configured to secure a meniscal tissue, a suture anchor comprising an eyelet, at least one suture configured to be coupled to the at least one tissue fixation member and configured to be received through the eyelet of the suture anchor, and a delivery device configured to assist with delivery of the at least one tissue fixation member into a body.

[0031] For example, in one or more embodiments, the kit for meniscal repair may include at least one of the first tissue fixation member 101, the second tissue fixation member 102, and the third tissue fixation member 103, the suture anchor 110, and at least one suture configured to be coupled to the at least one tissue fixation member and configured to be received through the eyelet of the suture anchor, *e.g.*, sutures 105, 106, 107. Further, in one or more embodiments, the kit for meniscal repair may include the delivery device 109 configured to assist with delivery of the at least one tissue fixation member into a body. As discussed above, the delivery device 109 may include a cannulated spinal needle and an obturator (not shown), *e.g.*, a deployment rod (not shown), configured to assist with deployment of the tissue fixation members.

[0032] Advantageously, embodiments disclosed herein may provide an assembly for meniscal repair that reduces the difficulties and time to repair the meniscus. The aspects of the invention, discussed above, may allow endoscopic meniscal repair to virtually any area of the meniscus and may minimize the danger to neurovascular structures and the need for additional ancillary incisions.

[0033] While embodiments have been described with respect to a limited number of embodiments, those skilled in the art, having benefit of this disclosure, will appreciate that other embodiments can be devised which do not depart from the scope of embodiments disclosed herein. Accordingly, the scope of embodiments disclosed herein should be limited only by the attached claims.

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[0034] The reference in this specification to any prior publication (or information derived from it), or to any matter which is known, is not, and should not be taken as an acknowledgment or admission or any form of suggestion that that prior publication (or information derived from it) or known matter forms part of the common general knowledge in the field of endeavour to which this specification relates.

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THE CLAIMS DEFINING THE INVENTION ARE AS FOLLOWS:

1. An assembly for meniscal repair comprising:

a first tissue fixation member configured to secure a meniscal tissue;

a suture anchor comprising a proximal end, a distal end, and a central axis defined therethrough, an eyelet, and a textured outer surface for anchoring within a bone; and

a first suture configured to be coupled to the first tissue fixation member and configured to be received through the eyelet of the suture anchor;

wherein the first tissue fixation member is configured so that upon deployment of the first tissue fixation member, the first tissue fixation member is reoriented such that a longitudinal axis of the first tissue fixation member is parallel to a contacting surface of the meniscal tissue.

2. The assembly of claim 1, further comprising a second tissue fixation member configured to secure a menisal tissue.

3. The assembly of claim 2, further comprising a second suture to be coupled to the second tissue fixation member and configured to be received through the eyelet of the suture anchor.

4. The assembly of any one of claims 1 to 3, wherein the textured outer surface is located near the distal end of the suture anchor.

5. The assembly of any one of claims 1 to 4, wherein the textured outer surface of the suture anchor is a threaded outer surface.

6. The assembly of any one of claims 1 to 4, wherein the textured outer surface is a stepped outer surface.

7. The assembly of any one of claims 1 to 6, further comprising a fixation plug.

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8. The assembly of claim 7, wherein the suture anchor comprises a longitudinal hole formed along the central axis of the suture anchor configured to receive the fixation plug.

9. The assembly of claim 8, wherein the fixation plug is configured to secure at least one suture within the eyelet of the suture anchor.

10. The assembly of either one of claims 8 and 9, wherein the longitudinal hole formed through the suture anchor is a threaded hole.

11. The assembly of claim 10, wherein the fixation plug comprises a threaded outer surface configured to engage with the threaded hole of the suture anchor.

12. A method for meniscal repair comprising:

providing a first tissue fixation member configured to secure a meniscal tissue, a suture anchor having an eyelet, and a first suture;

securing the first suture to the first tissue fixation member;

securing the first tissue fixation member to a meniscal tissue

threading the first suture through the eyelet of the suture anchor;

securing the suture anchor within a bone; and

tensioning the first suture within the suture anchor;

wherein the first tissue fixation member is configured so that upon deployment of the first tissue fixation member, the first tissue fixation member is reoriented such that a longitudinal axis of the first tissue fixation member is parallel to a contacting surface of the meniscal tissue.

13. The method of claim 12, further comprising making a single incision into a skin and forming a portal into a body.

14. The method of either one of claims 12 and 13, further comprising forming a hole within the bone.

15. The method of either one of claims 13 and 14, further comprising engaging the first tissue fixation member and a delivery device and disposing the delivery device and the first tissue fixation member through the portal, into the body.

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16. The method of any one of claims 12 to 15, further comprising:
securing a second suture to a second tissue fixation member;
threading the second suture through the eyelet of the suture anchor; and
tensioning the second suture within the suture anchor.

17. The method of claim 16, further comprising engaging the second tissue fixation member and the delivery device and disposing the delivery device and the second tissue fixation member through the portal, into the body.

18. The method of claim 15, further comprising disengaging the first tissue fixation member from the delivery device and removing the delivery device from the body.

19. The method of claim 17, further comprising disengaging the second tissue fixation member from the delivery device and removing the delivery device from the body.

20. A kit for meniscal repair comprising:
at least one tissue fixation member configured to securing a meniscal tissue;
a suture anchor for anchoring in a bone comprising an eyelet;
at least one suture configured to be coupled to the at least one tissue fixation member and configured to be received through the eyelet of the suture anchor; and
a delivery device configured to assist with delivery of the at least one tissue fixation member into a body;
wherein the first tissue fixation member is configured so that upon deployment of the first tissue fixation member, the first tissue fixation member is reoriented such that a longitudinal axis of the first tissue fixation member is parallel to a contacting surface of the meniscal tissue.

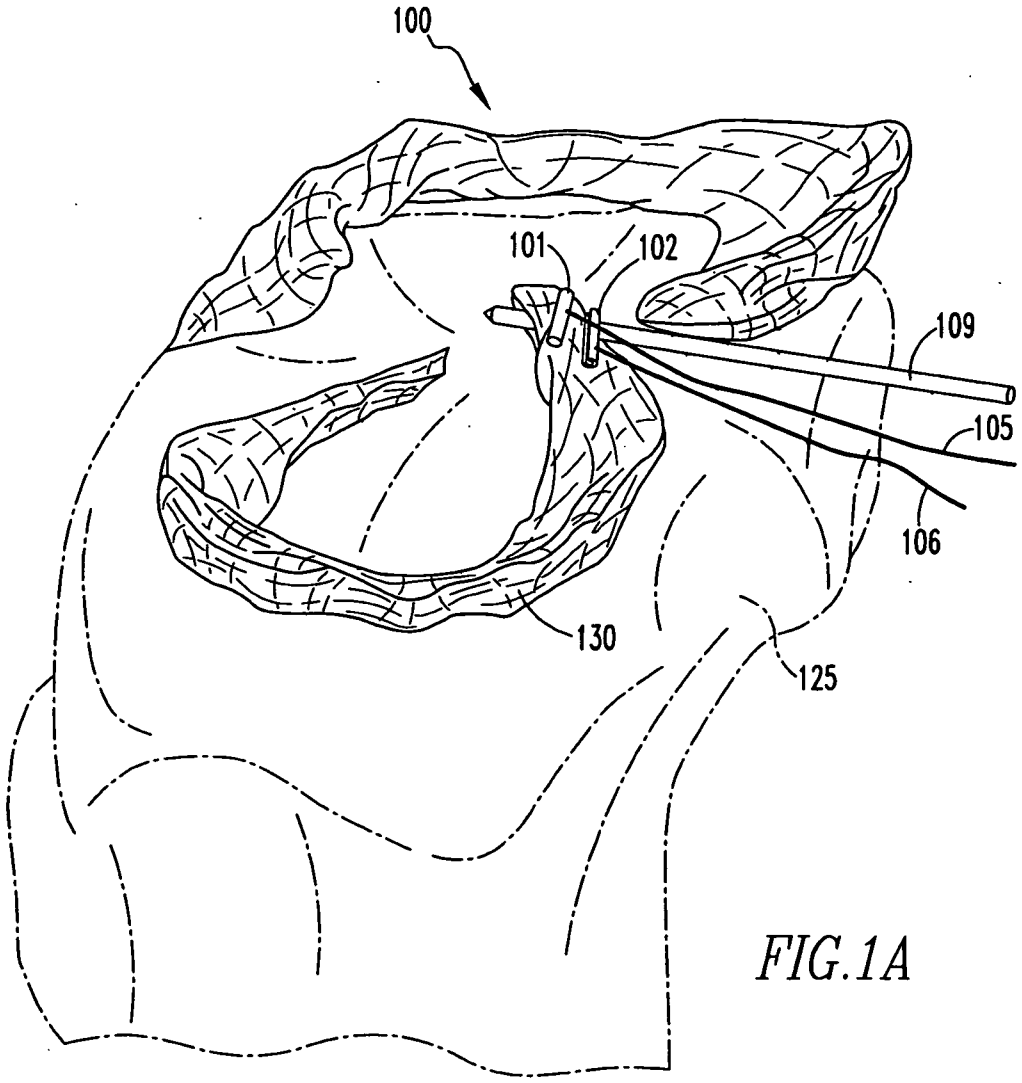

FIG.1A

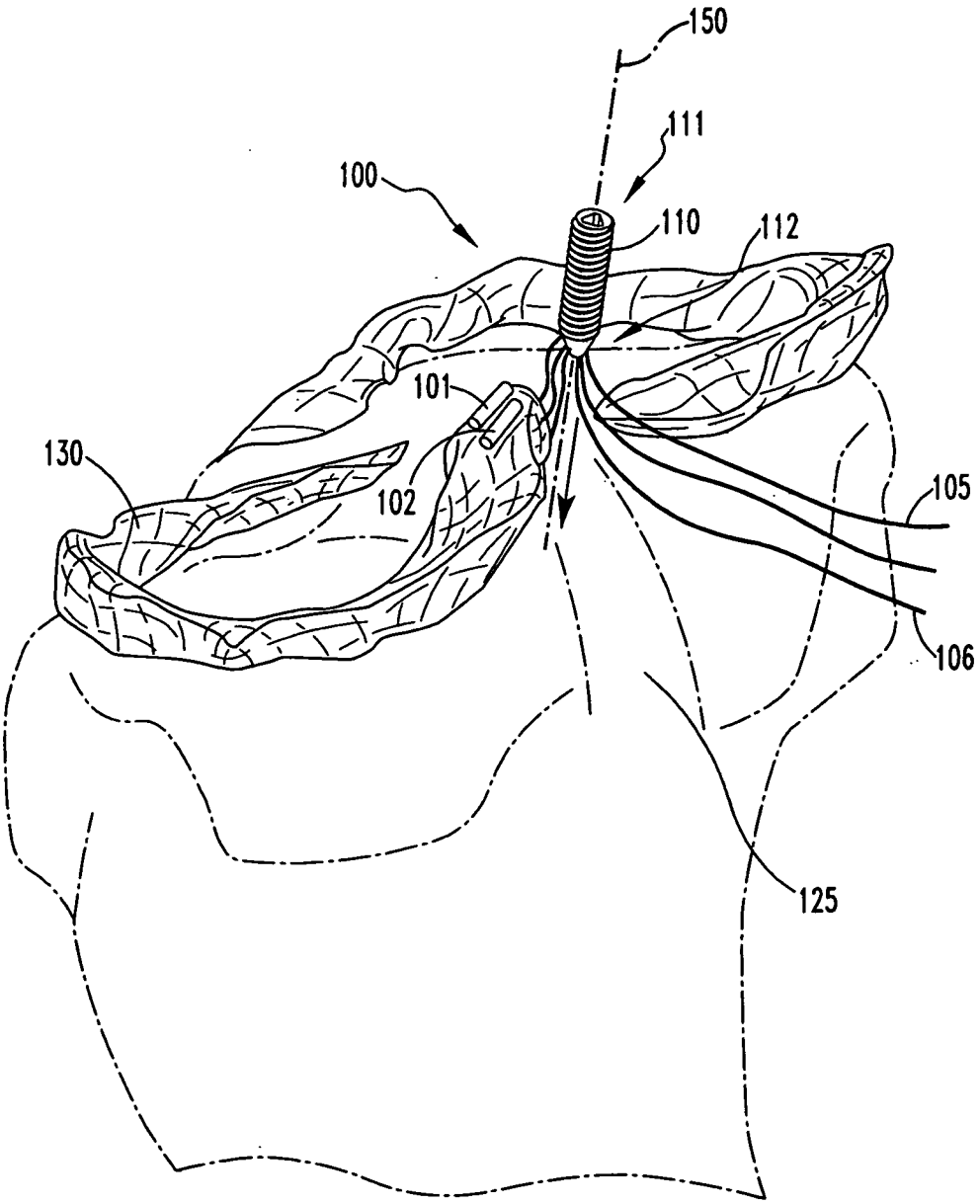

FIG.1B

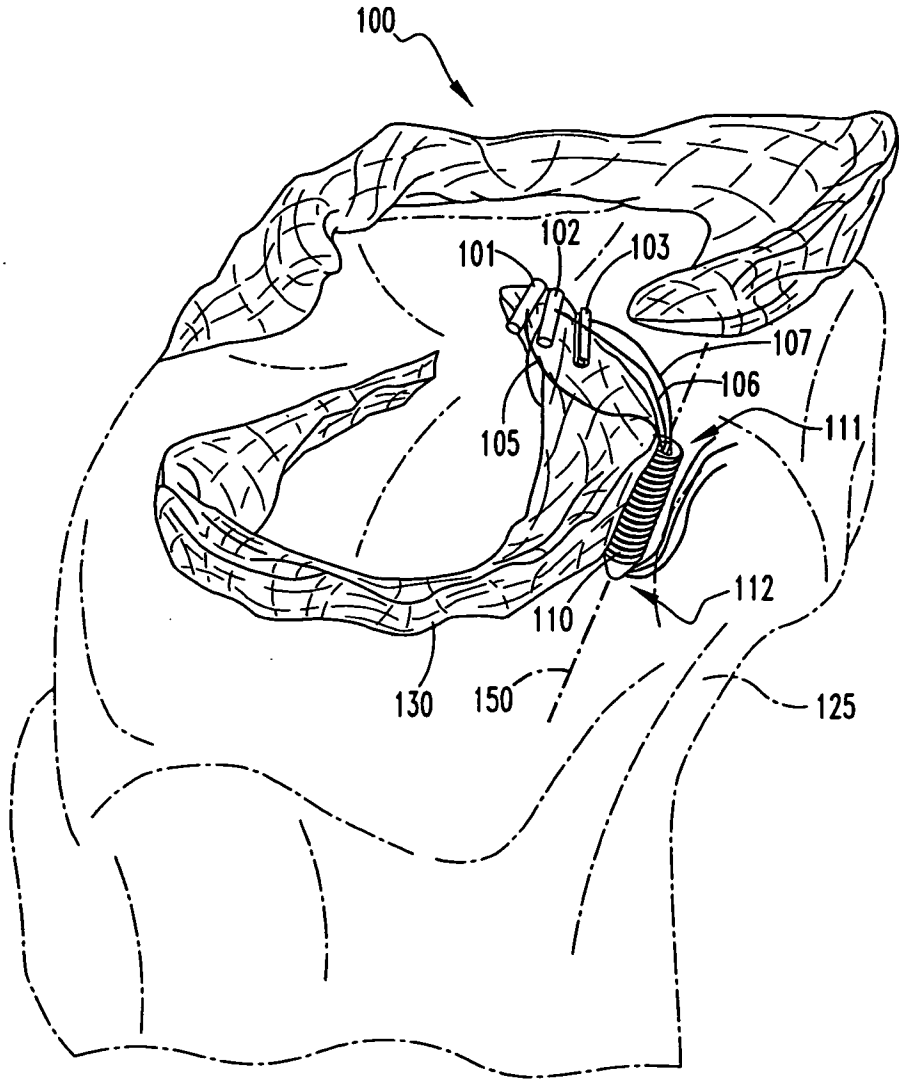

FIG.1C