~~LENGTH OF SELF-RETAINING SUTURE AND METHOD AND DEVICE FOR USING THE SAME~~

BACKGROUND OF INVENTION

The present invention relates generally to an improved length of self-retaining suture and, more particularly, relates to converging sections of self-retaining suture as well as the method and device for using the same.

Self-retaining sutures have been used in the past in many different surgical applications. Self-retaining sutures have been shown to perform particularly well in binding together various body parts such as skin, muscle tissue, organs, blood vessels, tendons, organs and the like. Self-retaining sutures are advantageous to the surgical team because they provide an effective ligature of tissue without the requirement of an anchoring suture knot which can be difficult to tie and which can cause damage to tissue during the wound healing process. Self-retaining sutures also simplify many tissue repair applications by more evenly distributing repair retention forces along the length of the suture. The optimization of self-retaining sutures is disclosed in detail in U.S. Patent Publication US 2004/0060409A and is incorporated herein in its entirety.

Typically, self-retaining sutures have been used to bind mammalian body parts together by passing a first length of self-retaining suture through a first section of tissue to be bound in a direction in which the retainers may pass relatively freely in one direction through the tissue, but will resist movement if the suture is moved in the direction opposed to the insertion direction. Then a second length of suture is passed through a second section of tissue in a second direction. Finally, the surgeon joins the two lengths together by tying them or otherwise binding them together.

One alternative method for use of a self-retaining suture is to use a single length of rigid self-retaining suture having a first end, a second end and the retainers disposed on the length of the suture in a bidirectional fashion. A portion of the length of the suture has retainers facing a first end and a portion of the length of the suture has retainers facing the second end. The suture binds tissue together by inserting the first end in a first section of tissue and inserting the second end in a second section of tissue. The diverging retainers resisted movement of the sections away from the wound and help bind them together. This retainer design and methodology is disclosed more fully in U.S. Patent 6,241,747B1 and is incorporated herein in its entirety.

LENGTH OF SELF-RETAINING SUTURE AND SUTURE INSERTION DEVICE

BACKGROUND OF INVENTION

The present invention relates generally to an improved length of self-retaining suture and, more particularly, relates to converging sections of self-retaining suture as well as the method and device for using the same.

Self-retaining sutures have been used in the past in many different surgical applications. Self-retaining sutures have been shown to perform particularly well in binding together various body parts such as skin, muscle tissue, organs, blood vessels, tendons, organs and the like. Self-retaining sutures are advantageous to the surgical team because they provide an effective ligature of tissue without the requirement of an anchoring suture knot which can be difficult to tie and which can cause damage to tissue during the wound healing process. Self-retaining sutures also simplify many tissue repair applications by more evenly distributing repair retention forces along the length of the suture. The optimization of self-retaining sutures is disclosed in detail in U.S. Patent Publication US 2004/0060409A and is incorporated herein in its entirety.

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