



SHARPSHOOTER[®]

TISSUE REPAIR SYSTEM

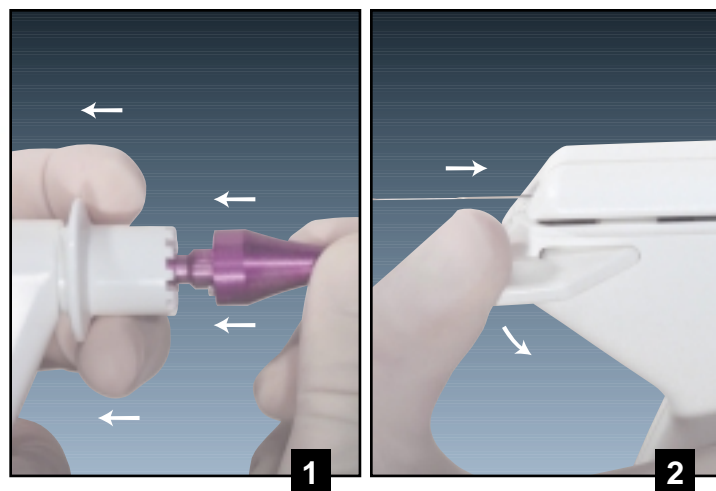
MENISCUS REPAIR

SURGICAL TECHNIQUE



SHARPSHOOTER®

TISSUE REPAIR SYSTEM



DESCRIPTION

The SharpShooter® Tissue Repair System† is a new evolutionary product for inside-out meniscal repair. The SharpShooter™ Tissue Repair System is a single-handed suture passer designed to allow the surgeon to repair meniscus tears more accurately and with less assistance in the operating room. The system is composed of:

SharpShooter® Handle

The SharpShooter® Handle is a disposable suture passer that incrementally advances a suture-carrying meniscus repair needle. The SharpShooter® Handle is provided sterile, and is intended for single-use only. Do not resterilize the handle.

SharpShooter® Cannulae

The SharpShooter® Cannulae are specially designed cannulae that attach to the SharpShooter® Handle, allowing the surgeon to gain access to all aspects of the meniscus. There are six configurations of the SharpShooter® Cannulae. Right and Left Cannulae correspond to the surgeon's right or left while facing the affected knee.

- The Right and Left Posterior Cannulae (purple) are used in the posterior third of the meniscus.
- The Right and Left Middle Cannulae (green) are used in the middle third of the meniscus.
- The Right and Left Anterior Cannulae (red) are used in the anterior third of the meniscus.

The SharpShooter™ Cannulae are provided non-sterile.

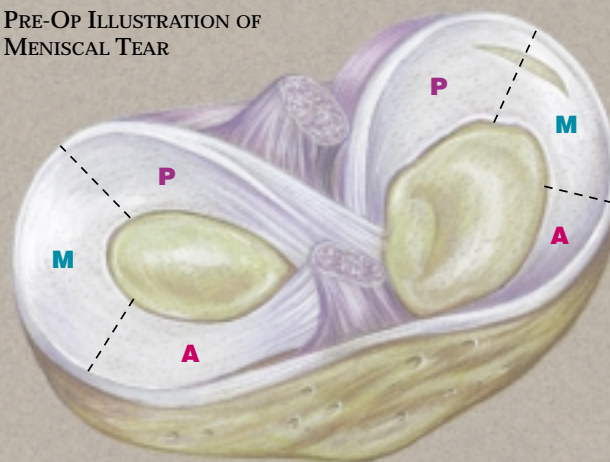
SharpShooter® Sutures

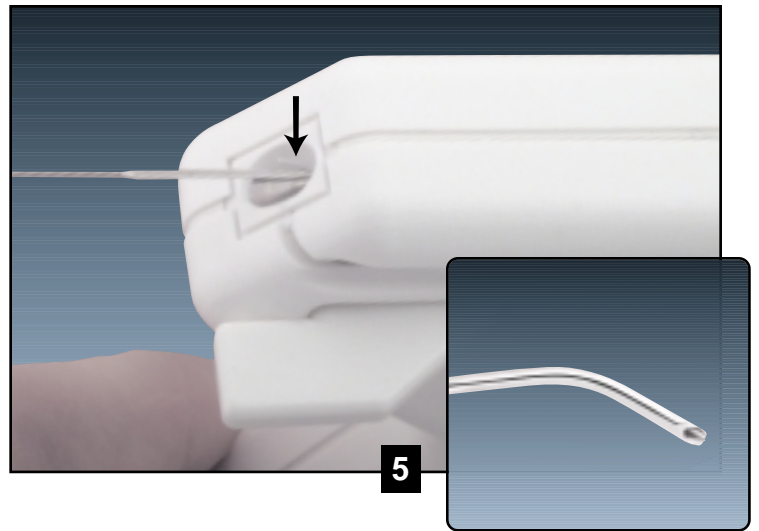
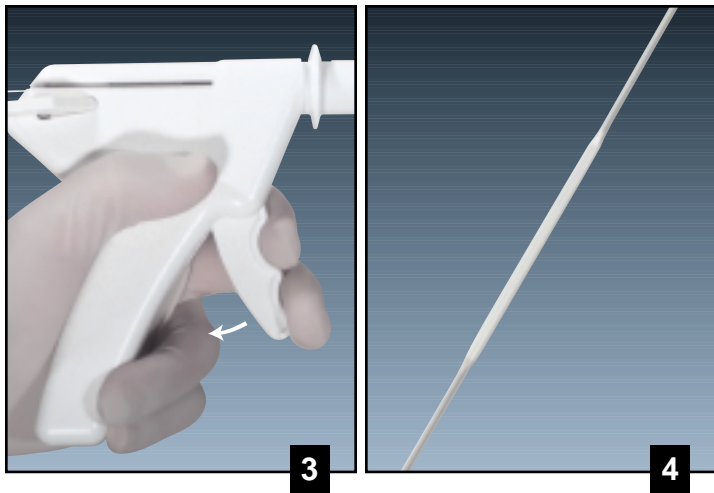
The SharpShooter® Sutures are double-armed, straight trocar point 13" needles with non-absorbable 2-0 polyester surgical sutures. The SharpShooter® Sutures are single-use and are provided sterile.

Indications for Use/Contraindications

When contemplating meniscus repair, the surgeon must consider the many factors that may affect its result. These include location of the tear, the extent and type of tear, the age of the patient, and the presence of associated injuries such as cruciate ligament insufficiency. Diagnostic arthroscopy indicates whether a meniscus repair is needed and is possible. The SharpShooter™ Tissue Repair System provides a method for the fixation of tears in the vascularized area of the meniscus. The SharpShooter™ Tissue Repair System should not be used in lesions that would not be considered for repair by suturing, or in patients with active infection.

PRE-OP ILLUSTRATION OF MENISCAL TEAR





SURGICAL TECHNIQUE

Preparation

The knee is flexed to approximately 90° and a posterior incision (medial or lateral depending on affected meniscus) is made at the level of the joint line through the skin and underlying fascia. SharpShooter™ Sutures will be retrieved from this incision.

Standard arthroscopic portals are used for meniscus fixation with the SharpShooter™ Tissue Repair System. The meniscus tear is identified and the tear surfaces are abraded with either a rasp or shaver to enhance healing. An appropriate “left” or “right” SharpShooter™ Cannula is chosen by facing the knee and determining if the tear is located on the left or right side of the knee.

Cannula Attachment

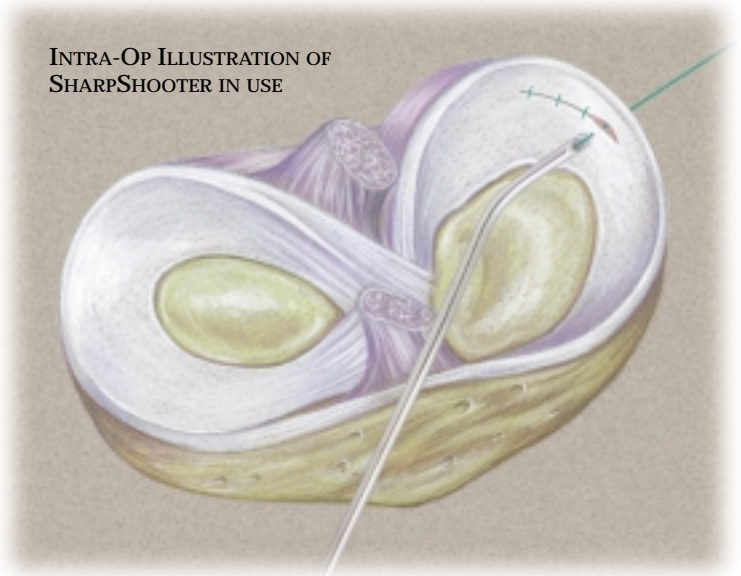
The SharpShooter™ Cannula is attached to the SharpShooter™ Handle by inserting the proximal aspect of the cannula into the handle’s distal hub (Figure 1). An audible click will signify secure attachment. The SharpShooter™ Cannula can be attached in a number of rotational orientations with respect to the SharpShooter™ Handle, depending on surgeon preference. The SharpShooter™ Cannula is inserted through an arthroscopic working portal. The system is designed to allow the surgeon to perform a meniscus repair contralaterally.

Suture Preparation

The first arm of the SharpShooter™ Suture is loaded into the SharpShooter™ Handle by inserting the leading tip of the suture needle into the opening located on the proximal aspect of the handle. The needle should be introduced following the angle of the metal insert, and then lifted to be parallel to the handle’s side slot as it is advanced. Depressing the handle thumb lever allows the suture needle to be passed through the handle and cannula (Figure 2). When resistance is met, depressing the handle trigger further advances the suture needle (Figure 3).

Note that proximally, the suture needle contains a 20mm flat area (Figure 4). The SharpShooter™ Suture is advanced in the SharpShooter™ Handle until the leading edge of the flat coincides with the proximal opening of the handle. When in this position, the leading tip of the suture needle is in position to exit the SharpShooter™ Cannula (Figure 5).

INTRA-OP ILLUSTRATION OF SHARPSHOOTER IN USE



(suturing technique continued on back)

SHARPSHOOTER®

TISSUE REPAIR SYSTEM



Suturing

Prior to advancing the SharpShooter® Suture into the meniscus, a retractor or small spoon is placed through the posterior incision in order to feel and deflect the suture needle, thereby protecting the neurovascular structures.

The suture is carefully advanced through the meniscus by depressing the trigger. Depending on how far the trigger is depressed, the suture needle can be advanced from between 1mm to 8mm. An indication of whether the SharpShooter® Suture has passed through both the meniscus and joint capsule occurs when the back edge of the flat located on the suture needle coincides with the proximal opening of the SharpShooter® Handle.

Once the tip of the suture needle has been secured with a standard needle holder, the thumb lever is depressed and the suture is withdrawn through the posterior incision. Extreme caution must be taken to avoid damage to the neurovascular structures. The suture is cut from the needle and tagged.

While keeping the cannula within the knee, the second suture needle of the SharpShooter® Suture is loaded into the handle as before (Figure 6). Care must be taken to keep the suture from becoming wrapped around the SharpShooter® Handle or thumb lever (Figure 7). The tip of the cannula is positioned appropriately depending on whether a horizontal or vertical suture pattern is desired. The second suture needle is advanced through the meniscus by depressing the trigger, and carefully removed through the posterior incision. The result is a single interrupted mattress suture stabilizing the meniscus tear.

Depending on the complexity of the meniscus tear, additional sutures are placed in a similar fashion every 4mm to 5mm. Once an adequate number of sutures are in place, light tension is applied to the suture bundle to ensure stabilization of the repaired meniscus and the sutures are tied directly over the joint capsule.

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†U.S. Patent No. 5,928, 252. ♻️ Printed in USA CST 3017