MEDCO FORUM®

PRESENTING INNOVATIVE PRODUCTS & SERVICES TO HEALTHCARE PROFESSIONALS

VOLUME 14 NUMBER 49 OCTOBER 2007

REPRINT

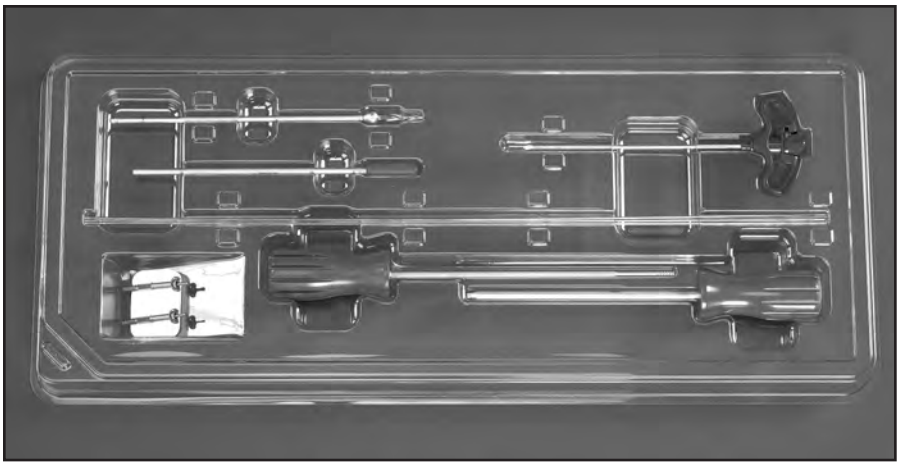
PERCUTANEOUS LUMBAR FIXATION VIA PERPOS™ SYSTEM FROM INTERVENTIONAL SPINE™

Lumbar fusion is a procedure commonly performed for degenerative disc disease in an attempt to stabilize the spine. There is a variety of instrumentation systems designed to internally immobilize the targeted spinal segments to enhance the fusion rate.[1] The pedicle screw, with an interbody, is the current standard means of fixation. Recent advancements in spinal fusion technology and the adoption of new techniques, however, have led to improved surgical outcomes. One significant development has been the shift to less invasive surgical procedures. As an alternative to conventional surgery, percutaneous placement of effective fixation devices reduces potential injury to any adjacent structures while achieving the same goal of rigid fixation.

> *"This procedure involves smaller incisions, less soft tissue destruction and less trauma to the muscles. For the patients, this means less blood loss, shorter hospital stays, less post-operative pain and faster recovery."*
>
> **Dahari Brooks, MD**

Interventional Spine™ (Irvine, CA), has now made it possible for surgeons to perform posterior lumbar stabilization and achieve lumbar fusion at single or multiple levels without cumbersome rod and screw technology. The Interventional Spine **PERPOS™ System** is a complete set of prepackaged and sterile single-use instruments engineered for percutaneous implantation of one-size fits all **BONE-LOK®** implants. Developed with the company's superior **CLASP®** custom compression fit technology designed to achieve facet-to-pedicle fixation, the PERPOS System provides safe and effective fixation in both normal and osteoporotic bone, leaving less hardware in the patient and preserving the adjacent facet joint(s). Utilizing the innovative **Teleport® Tissue Retractor,** surgeons can access the spine using only a single 15-mm percutaneous entry site, minimizing disruption to the soft tissue. The axial compression of the 'one size fits all' device allows the BONE-LOK to size to appropriate length *in vivo.*

Dahari Brooks, MD, Assistant Professor of Orthopedics, Division of Spine Surgery, at the University of Massachusetts Medical School (Worcester, MA), explains the move toward the adoption of percutaneous lumbar fixation methods with the PERPOS System: "This procedure involves smaller incisions, less soft tissue destruction and less trauma to the muscles. For the patients, this means less blood loss, shorter hospital



The PERPOS™ System from Interventional Spine is a complete set of prepackaged, sterile, single-use instruments.

stays, less post-operative pain and faster recovery." In addition, Dr. Brooks finds the PERPOS implantation system reliable, noting, "It is important to find a system you are comfortable with and also one with which you can reproduce results time after time."

Mark R. Grubb, MD, an Orthopedic Spine Surgeon at the Northeast Ohio Spine Center (Canton/Akron, Ohio), realizes a real time savings with the PERPOS System. "We can do a percutaneous fixation in 5 to 10 minutes, as opposed to an hour as with more conventional techniques." Dr. Grubb has also adopted a new guidance technique for using the PERPOS System. "We use the fluoroscopic navigation as well as conventional fluoroscopy. It gives us better definition of the patient's anatomy and I think, to a large degree, makes the procedure safer." Not only is the system safer, notes Dr. Grubb, but he finds that it has an extremely low profile. "In fact, it's the lowest profile construct that one could put in for a patient, so there is less likelihood of soft tissue irritation post-operatively."

Interventional Spine has completed extensive biomechanical testing for the BONE-LOK implants. As compared to a conventional facet screw, the BONE-LOK implant is 23 percent more resistant to pull out and offers up to 50 percent more compression. In 'Range-of-Motion' testing, the BONE-LOK technology demonstrated statistically similar stiffness for a single-level fusion and statistically similar anterior column loading for each direction of testing, as compared to conventional pedicle screw constructs. Dr. Brooks believes that the CLASP technology from Interventional Spine is the key mechanical feature of the BONE-LOK Implant. "I think in terms of the fixation, it is superior to conventional facet screws and the 'one-size-fits-all' feature is helpful. It reduces the number of instruments needed as well as inventory. Dr. Brooks continues. "The facet-pedicle construct is less expensive and faster to put in and there is less trauma to the facet capsule of the uninvolved level."

The PERPOS System and the TELEPORT Tissue Retractor come in single-use kits. "Everything I need is included in one prepackaged, sterile container," notes Dr. Grubb. "Before this, there was no good system. We had to use screws that were applied to other areas of the body and try to adapt them to the spine. The sole purpose of the BONE-LOK implant is for facet-pedicle fixation." Dr. Grubb sums up his opinion of the PERPOS System by saying, "It's the least invasive method of fixating the lumbar spine. It's an easy and readily adaptable technique and is probably something that every surgeon should have in his armamentarium in terms of spinal fixation."

To Learn More

For more information about Interventional Spine or the PERPOS™ System, please call 1-949-472-0006, or visit the company's Web site at www.i-spineinc.com.

Reference:

1. Park, P. and Foley, KT, Percutaneous Lumbar Pedicle Screw Fixation, European Musculoskeletal Review, 2007; 59-60.